

1909. F

1909



Salon, Musée
de l'Académie Nationale
de la Peinture

Histoire

Français
Nauplie
Grecque

The Valley

If this book falls
into your hands
return it to

B. Shunk

Iowa City

Iowa

\$20 50

who will see to it that
you are compensated
for your trouble

3.1/2
or 58/2

April 9-1909 1

In the same city &
at the same place as
Col. J. H. C. was
Plainsman April 10-1909
Plainsman Malvern at 6:57 AM
& found Young O'Blunden of
Zabor (licorice) waiting
with a team.
Drove to Zabor; noticed
that territory is typical
rolling Kansas.
Saw a number of nests
(see map) and in all
cases Larva was in
evidence, - blue with
iron tubes. Also noticed
some shells but did not
stop to collect, as Prof.
Calvin was waiting.

Join Prof. Calvin at
Taber, & we started in
a little while for the
bluff country west.
We drove 1 mi. north & then
west. Passes hair-busted
trees & orchard hills out,
birch, boxelder, crab, alder,
etc., strips of bark,
follows down a long narrow
deep cañon to river. This
is very high, mountain like &
tree pretty well timbered.
The creek next to road has
usual deep narrow gully,
& road runs along edge
most of way.
From Mississ. from only Waukes
bluffs (see map).

At a in Ranch up the hill
the Mississ. about 3-4 ft.
above ground. The
soil is thin, rocky, sandy
etc. The soil is
fairly good, but the
creek bed is rocky, gravelly,
etc. At b - up hill 100 ft.
above ground, exposed
soil is thin, rocky, gravelly,
etc. At c on ridge a series
of cuts many feet apart,
with streaks (see box c)
This is typical yellow Mississ.
loam (see sample).
At d - in leaning yellow
loam (sw.) from base - 6 ft
above road. Also a few inches.

Box, box & sample

Spec. 25130 Rawls, V

25036 Lycop. many trees
and dead, stumps & bark
by a great trail - in
a lot of rocks

This is just above forest
zone which shows with
green lichen. (Edwin's)

These are in dark
soil (Afternoon) a few
green

Cotton grass above
in bottom of creek bed

Cedar occurs here - not
living, but logs.

Boulders appear in creek
here & there (not many.)

25136 - blue box with
brown sides, & under yellow
brown & green going in
bands, not in one &
continuous "area" like
the others. This
is living tree with very
green top & brown
on lower part below (d)
a little blue box below
(see box.)

These are from yellow box.
At e. a black soil with
shells about near base
of hill (nearly on level with
bottom) see stile. This
is under box
(f) is in cliff in crest
of bluffs. It is 95 ft. abo.

valley to the N. afternoon.

Thea Pit J. is

C. F. Kephart

Bartlett, Ga.

(will open new pit in summer.

days - Saw is about 20 ft

fin saw, then saw slabs,

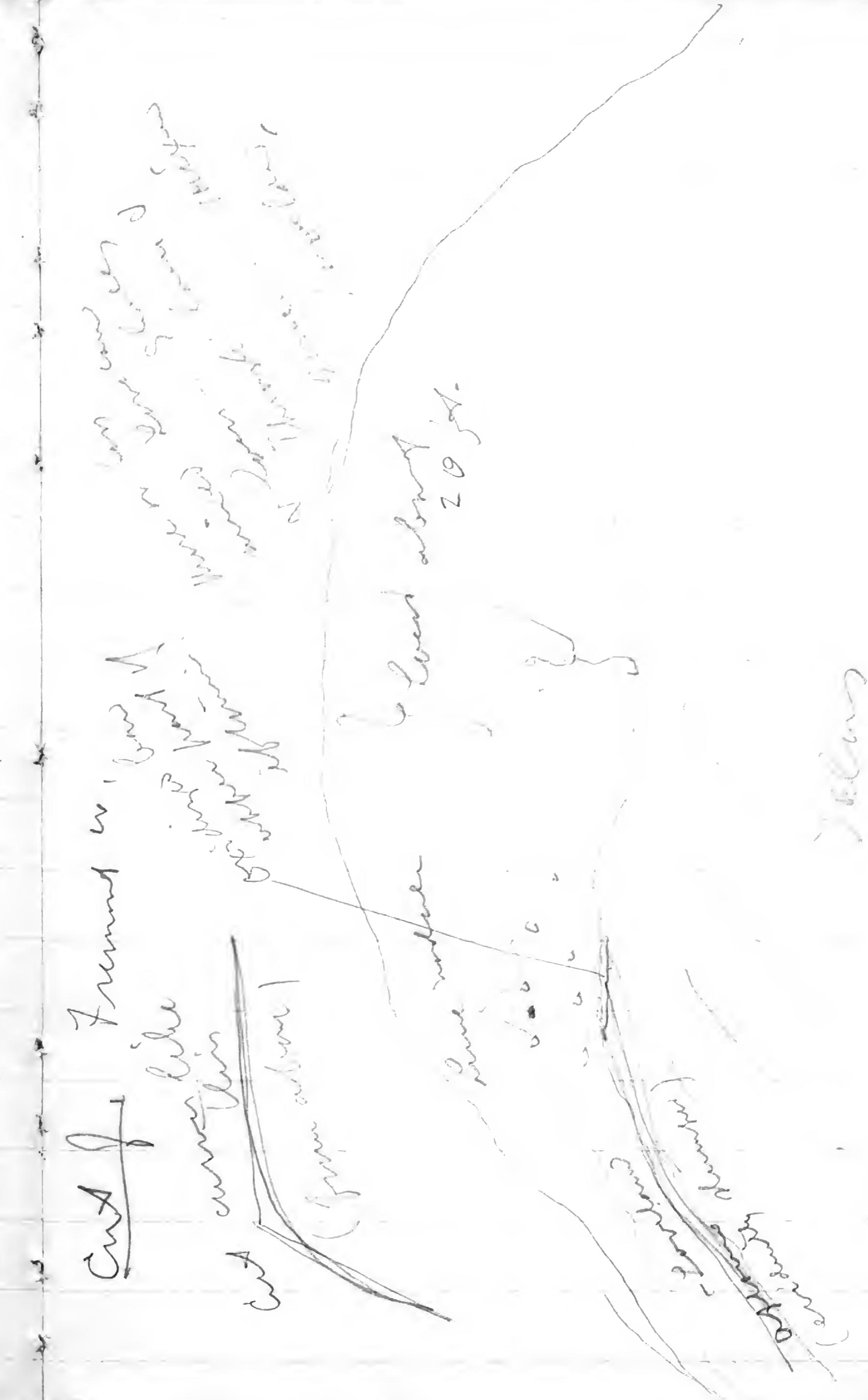
6-12 in & gravel 8 or 9 ft

Blue clay under all.

There has been shooting
& mining.

This is a line S. of the
lake,

Saw & gravel cut out all
along the cliff line. They
have found bones in
the ~~sand~~ sand.



all along this Crescent.
there is a bench, probably
60-70 ft above valley, &
above that nine high ridges
loess.

This terrain is fruit, apples
& Kava with corn. (see 2)
Prof. C. took picture looking N. - 1, 2, 3.
just about on Co. line.



In this Crescent the cliff was
wounded by one of the rivers.
There has evidently been
mining on it. The fine
roddes are large & irregular
pieces, the materials send
from it. There are some shale
even blue just north
Cassville Green shales.

Between d & valley there is a
cut on N. side of road showing
several feet of blue loess
with iron tubs.

Prof. C. took photos
of canon.

(on return)

New cuts of sec. 25 Lyons
Imp. Mills co.

A group of trees along
which is about killed by
the trail down of $\frac{1}{2}$ ft.
ago ago.

There are two cedar,
clay, a walnut,
Prof. C. took pictures

I also saw an ash and hickory
in same way.

Even though down it
thinks especially the walnut
down it more.

Timber etc. along road
are also partly stripped.

Hallstrom in June, 1908"

The Missouri area is
black, contrasted as shown on
map. The black line
shows what (on map?)

The difference between the
two areas is marked,
the Missouri even topography
roughly with short ridges,
& the soils are yellow.

The older area is more
rounded in topography & less
broken, and the soil is
darker. The latter
difference is strikingly
noticeable.

Reached Zabre in good
time for 3:30 P.M. train, &
took it. Prof. Calvin
should be tickled reading

"Good for one first class pass,"
wasn't first class. We
had an old rattle trap
coach.

The train stops at
nearly all the road
crossings!

The country along
R.R. to Malvern is
mostly rolling Kansas,
but a part is a
plateau.

Few cuts short, and
only one looked at
all inviting.
Reaches Malvern $\frac{4}{20}$ m. after
lunch I start down the
Wabash, S.E. Went to
1st cut, - a big one.

Big Wabash cut. S.E. of
Malvern -

$\frac{58}{\$1}$ { said

Subsoil more abundant
in upper part.

58 Blue - no white
in top & well.

68 { blue
red

moderately
calcareous
above.

blue & white

78 } Very few

thin clay below

with blue streaks

Blue - no white

white
blue
yellow
green
brown
black
etc.

This turns ~~too~~ much
below & evidently I was
^(or in) near Cleveland.

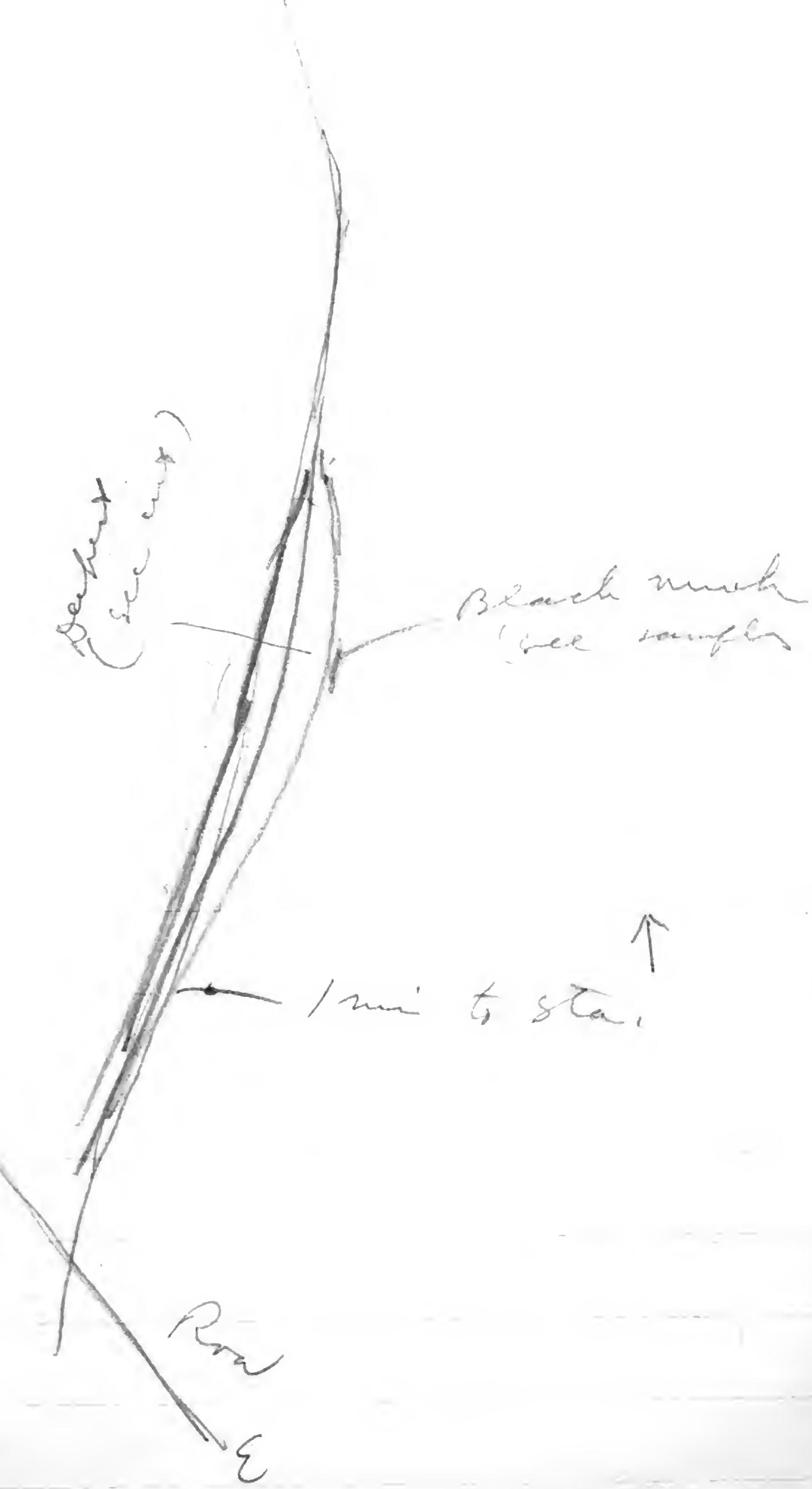
The top of talus goes up ³²~~40~~ ft. more. (See fossils, nodules & blue layer from 40 ft. from top.)

This top talus is lighter, (lower) reddish & runs into soil. It grades rather abruptly below into blue layer. Shells are mostly from within 5 ft. of top.

Tow 1 at about 10 ft.

Total depth of big and about 32 ft.

The one mile to station point is toward S.E. on



Toward N. end on E. side
(see sample)

a black soil ~~with a yellow~~

under blue (mud).

Even + after 6 or 8 in

comes very much

tougher + not so black.

(see sample)

The base seems to be right

as thin, with rather
sharp line.

The black band rises

2 ft above track +

about 2 ft below (in
gutter)

just above mud band

looks as pure blue for a

foot or more + then

red, etc., as before.

This heavy much

April 11 - Glencoe

The wind was so strong that I could scarcely walk against it, and the sand & dust cut my face.

It was from the S.W. & was terrible. Later in the day it subsided somewhat, but blew well all

day, & the valley was clouded with dust.

Early in the day I could see clouds of dust rising from the bars, & fields, - later all was hazy.

I follow track from Glencoe to Pacific Junction.

In last big cut on S side of track, going E., the heavy clay (brown at top and in green) is red & blue in streaks (like Madison bed but brown) & is probably Loveland, though it may be mainly lower part of blue loam.

There are no fossils in this lower part & it is sometimes difficult to determine whether it is a heavy loam or Loveland.

There has evidently been some weathering, & washes of alluvium above. But I could make out no distinct Pre-Kansas. The Kansas in the upper part is honey, blue with red streaks & is typical western Kansas.

Below, within 6 ft of a road it is blue, washed & blue & red along cracks, but less lime & few pebbles.

Small boulders, a more or less broken lime, separate Kansas & Loveland.

The lower part of Loveland for several ft. shows small pebbles.

Several large blocks lie on flat, left by graders, one a large D, 3 ft. sq - bounded by Survey D.
For about $\frac{1}{2}$ mile N. on W. side of bluff there is the usual terrace, in this case sloping somewhat more. The man near the "gap" has an orchard on it.

At an elevation
I could see (from Crain) a
number of worked stones
(evidently Aztalanian) and
just above Lester is
a bank of stratified
sand quite thick.
Rock worn below ledge.

~~It~~ is 85 ft. below I.

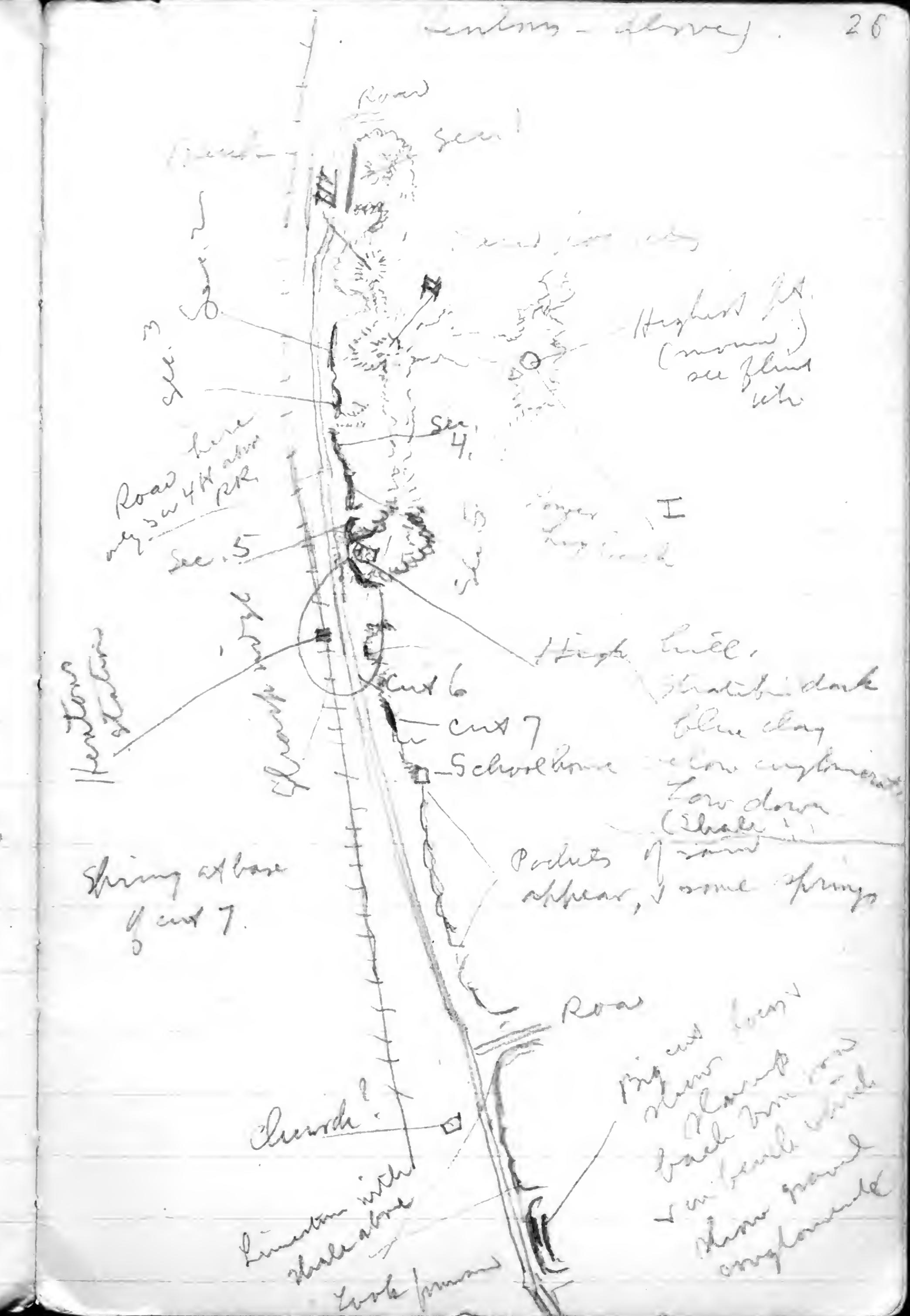
I is 70 ft below T

Yellow oven shelves at 130-140 below
various runs 190 to 225 ^{ft}
below /

270 W to foot of me. 3.

275 ft. to RR. which

is about 6-8 ft
above Missouri River



Sec. 1 runs up from about
8 to 30 ft above track

The section runs up with south
in about 7 or 8 ft high all
the way.

sec. 1-

x

yellowish
orange patches

It is a brownish alluvial soil
with a few scattered stones
& some shells (see shell)

Sec. 2



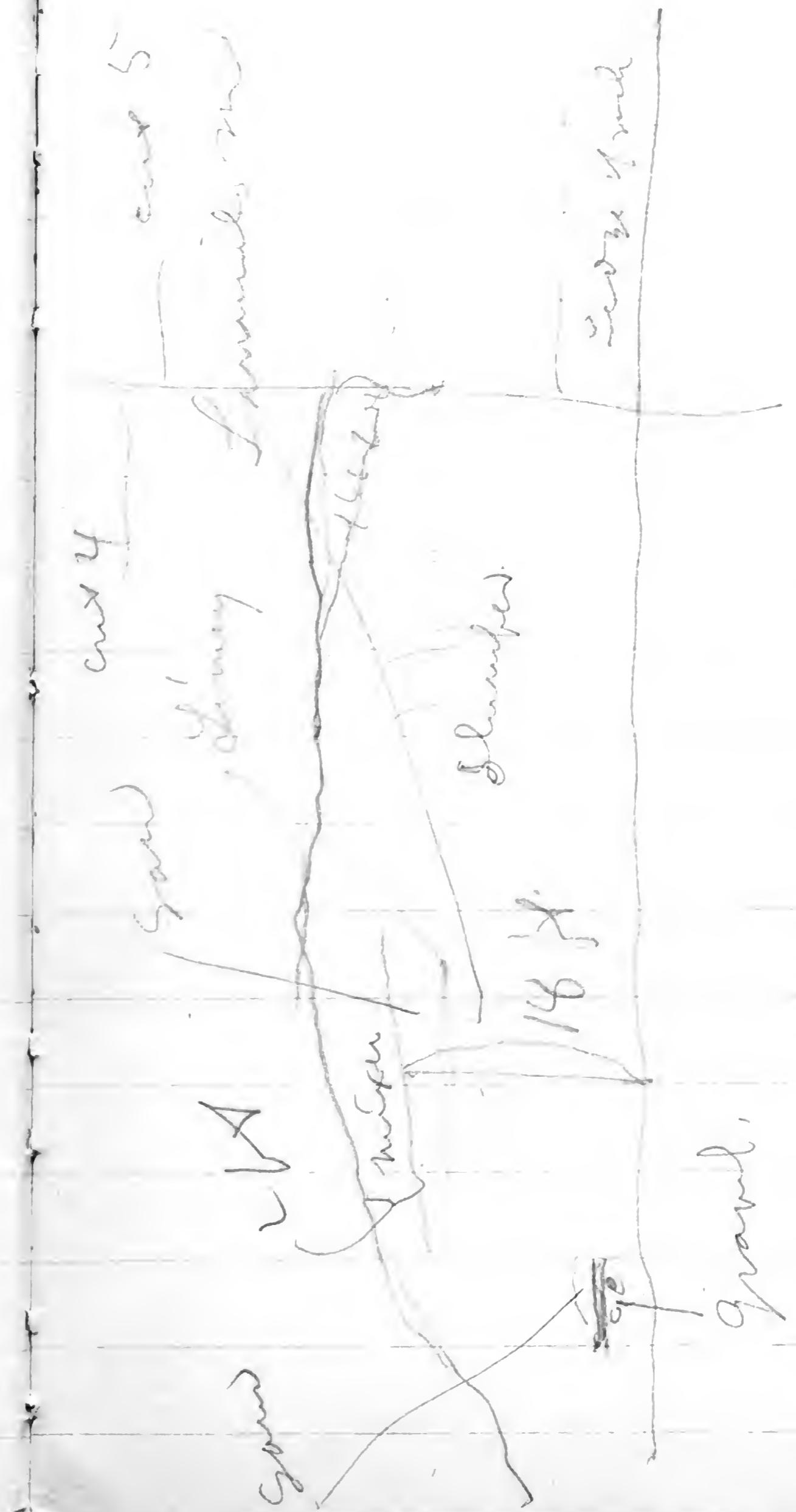
At X a heavy (mostly blue) clay
loess, with streaks of gravel fine
(probably overwash). The
loess has a few shells,
mostly broken.

This upper layer all along
is probably loess & drift
overwash from above.
Probably 20 ft. above RR.

Sec. 4, thin fine (in
upper 6 ft beautifully
horizontally laminated) sand)
Cover with 2 ft of weathered
dirt.

The top of sand rises
18 ft above Road & 20 ft.
above RR.

The sand extends to within
4 ft. above road, where it
rests on a bed of rusty
partly conglomerate gravel.
This shows but toward N. as



out 6

C. 6-8 ft.

1-1½' fissile
as yellow

6 ft Rock
(Minim)

River

a = Blue clay - very dark
b = pretty gravel, some
c = shales

c = shales (yellow) growing thin (about 5 ft.)

River
Tombas
gray 8-10 ft.
Tombas,

Karne

Sandy later

Big River D.

Brick stone

cut 5

8 ft.

4 ft. Limestone

Have many clay

Wk. sandy

clay & sand

□ Basic Vol.

63

Along cut 6, which is one
of high bank, rock shows
horizontally, about 3-4 ft
above road, & about 1/2 ft
above R.R.

On it all along shows a
rusty gravelly (some conglomerate)
layer, hardly a foot thick
in most places. The color varies
the same, but here & there, especially
South, it shows more.

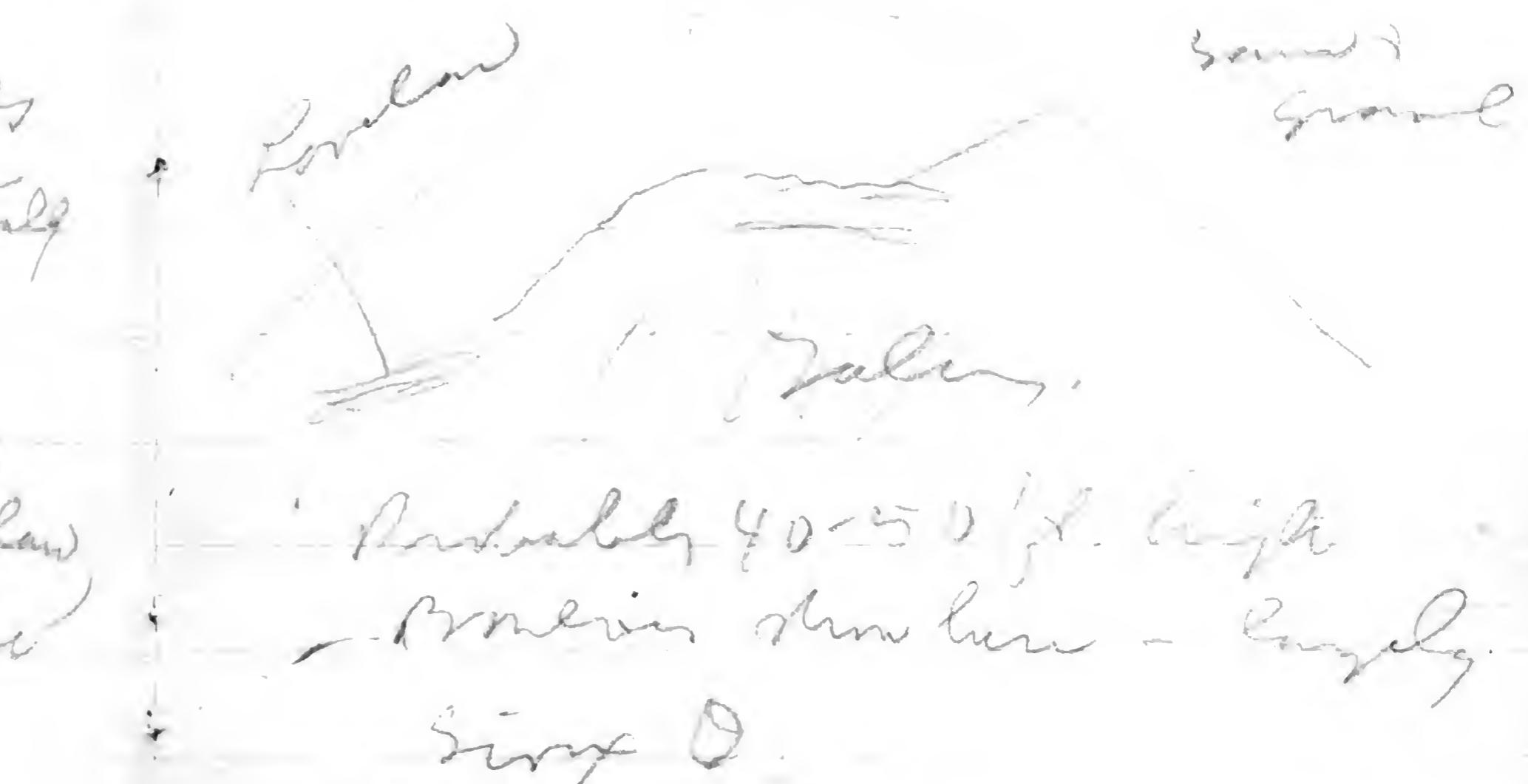
Above it is the heavy gray
joints clay & within the Loveland
soft. The usual mixture
above.

At extreme South, & around
turn to little divide
road, the sand above the
conglomerate is coarser,

cross-bedded & very rusty
4 ft. exposure - some gravel
band in it.

Cut 7 is high, but simple.

Shows irregular bands of
gravel, etc., with thin sand



Probably 40-50 ft. high
Brownish tan here - largely

Silt.

There is also gravelly conglomerate
here, & some sand-

Usual type, only
seems to be plainer.

Just S. of school a huge angular Sioux Q. boulder in bank is straddled by old Cannon stump.



Down from school
main road

Sand
docket

Ran
run
up on
side hill
a little

Big bottom
in side hill

Spring
(well)

Terrace

Spring all
along

Ran

June 1911

8

great cut
in granite
of much soil
A great amount
big Sioux Q. boulders
down sides of
ditch or
the rock mass are
great blocks of
conglomerate!
Up 30-50 ft.

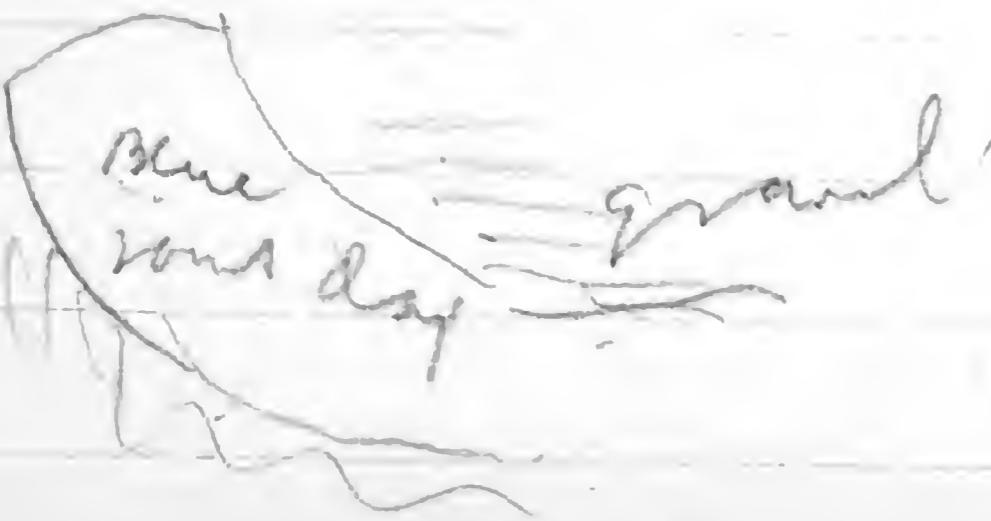
Cut Q.

Here an alluvial (bottom)
with shells
studs
down upon
some pebbles
underlying large
cross up back
in hill.

These exposures are nearly all in terrace which shows most of way now or less.

Cut 9. Show sand - 8 ft + bare areas. Some beautifully laminated, & upper part very rusty. K. drift & Loveland above it. Then Minne loess.

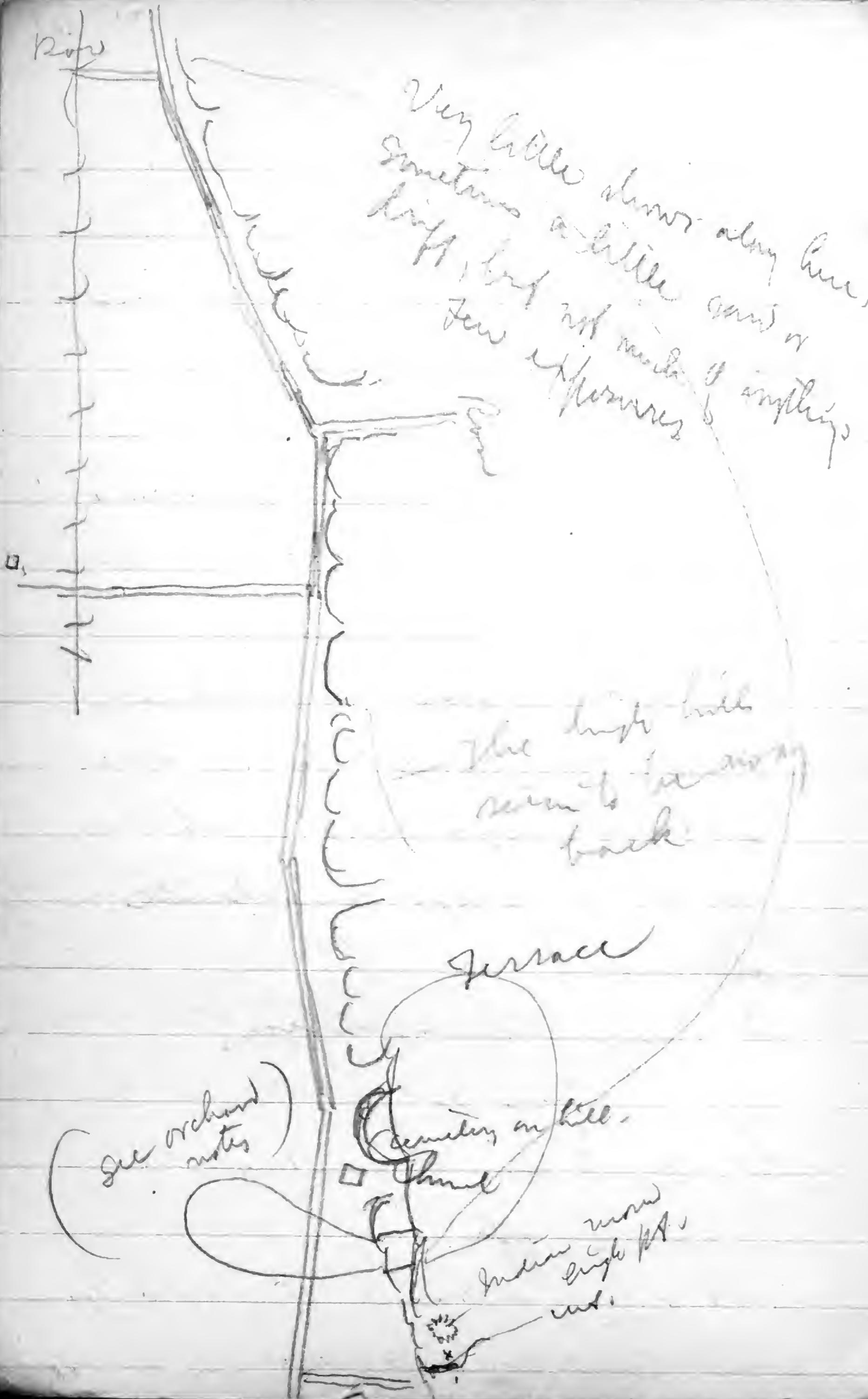
At its Sand



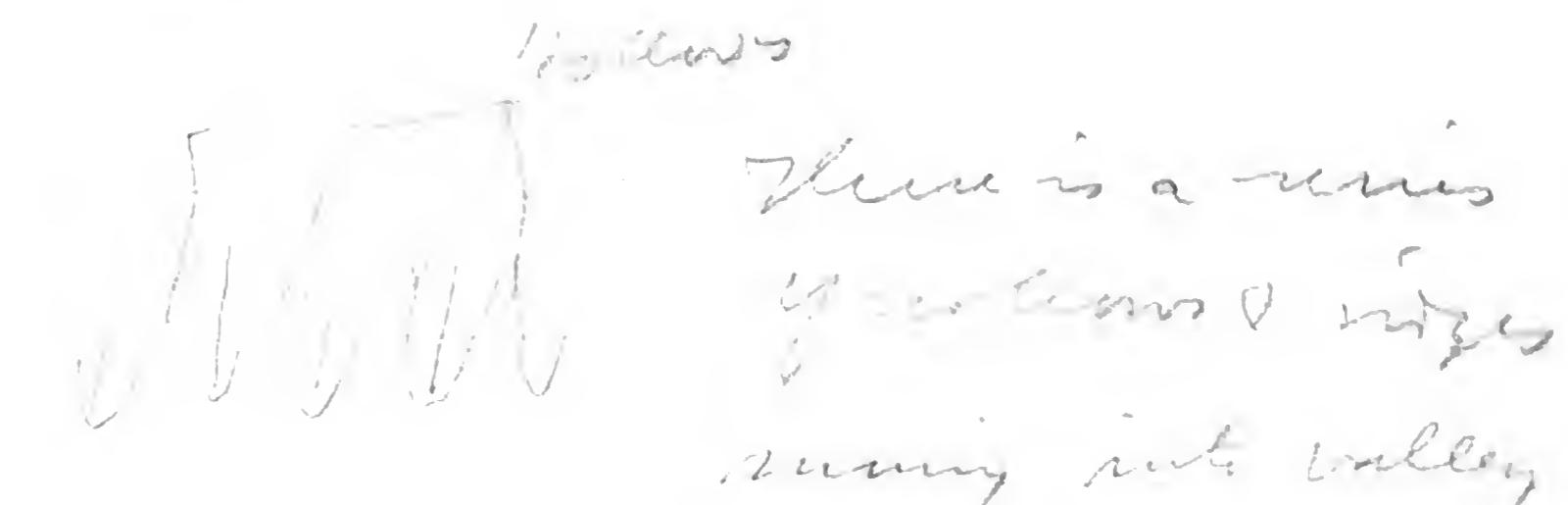
All along line the sandstone has dips and the same it. Overlook from village?

There are no sand pits between near Harton's and down to opposite Haeney's. The bluffs between Pacific City & the Glenwood gap do not look promising, & it seems hardly worth while to try them except for sounds on a few of high points.

Almost no exposures visible in this part. It is mostly timber, & bluffs slope down to valley.



Orcas notes. There is an orchard on the terrace (flat or flat, but this is being cut away).



The wind sweeps this nearly at R.L.'s. The apple trees in valleys & on flat cork well, but those on top of ridges are stunted or die out.

A fine illustration;

This is the same house along bluff church, the first is near church,

at x the old man at Key creek found a brachiosaur 15 ft. deep. He says

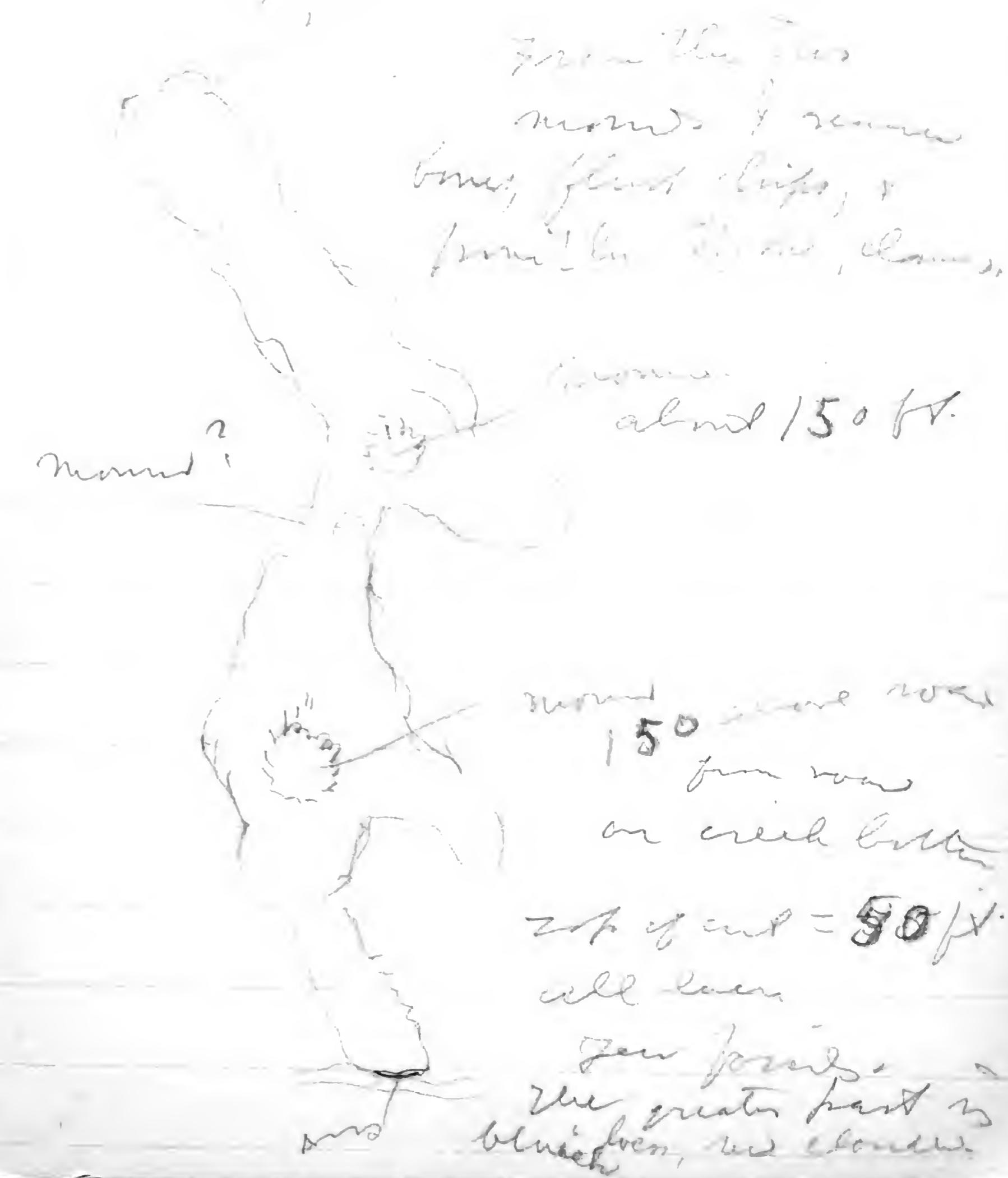
that in most they found pieces
of pottery, bone, etc.

To top of cut = 50 ft from
road on creek bottom.

To top of ridge, Dadian
mound, 150 ft.

They have found pieces of
pottery, small "flint"
axes, human bones,
etc., in the mounds.

The two represented
were dug into.



The Crescent begins
some distance above
Kenton, & extending to
Co-Bluffs, is not very
rolling. Slopes mostly
too gradual, no timber.

Left Council Bluffs
at 6¹⁵ PM & reached
Omaha at 2 AM
Monday.

To Harrison co.

May 13-1909

Lefs Iowa City at
10:30 PM. for Cedar Rapids
Raining -

May 14, 1909

Went to stars 1 & 3. ~~islands~~
Plants in sand near no. 2, &
also at 1 & 3.

At 1:
Asterolas -
~~Viola palustris~~
Castilleja sinuata
~~Agoseris~~
Tephroseris -
Antennaria
Aquilegia vulgaris

Also went to Cox's field & took
some. mostly fine sand
workers now.

In afternoon went west to "47"
Marion bridge.
Saw first of *Canna magnifica*
var. *variegata* in roadside
location.
Relatively common in sand
" Rhus glabra " "
" Ribes missouriensis " "
" Dandelion " "
(These are all given on p. 49.)

Also collected additional plants
(see p. 49).

The sands are freely desolate
at this season of the
year. I found a number
of *Morchella* in the
Cottonwood timber.
Also moss on the sand.

When coming back I noticed
all that stuff did not
show the contrast of
summer. Then the colors
were more brownish green
or grayish brown than
brown or olive green in
affection of green.

There is less evaporation
at this season of the
year, & the differences
so striking in summer
are scarcely noticeable.

For additional plants
observed see p. 47,
but I think it were
collected at the same place.
Succulents:
Vicia
Saponaria

also saw Lathyrus & Uva.

The following were on sand
in the more timbered ^{or brushy} part:

Populus deltoides
Salsola missouriensis
" " angustifolia
Cornus -
Vitis vulpina
Rhus glabra
Ribes missouriense
Taraxacum densiflorum

Also saw:
Helianthus annuus

May 15, 1907

Visited Twin. Babcock

gave me a horse with
the N. end of jet. I am
filled & they shipped south.
The section now appears as
shown on p. 51.

The Laramie is here quite
distinct.

The men say that they worked
(^{or any} ~~any~~) down to hard, putty
like dark blue clay. Mr.
Babcock saw it was very
tough to work. It is
evidently Pre-Kansas.

Babcock says that when ^{best} Elliott
was bargaining for land the old-
timers assured him that there was
sand everywhere in every wash on the hills!

He cited this to show how
"reliable" such information usually
is.

He said
he could
not
find
any
jet
in
the
area
he
was
working
in
Twin
City
area.

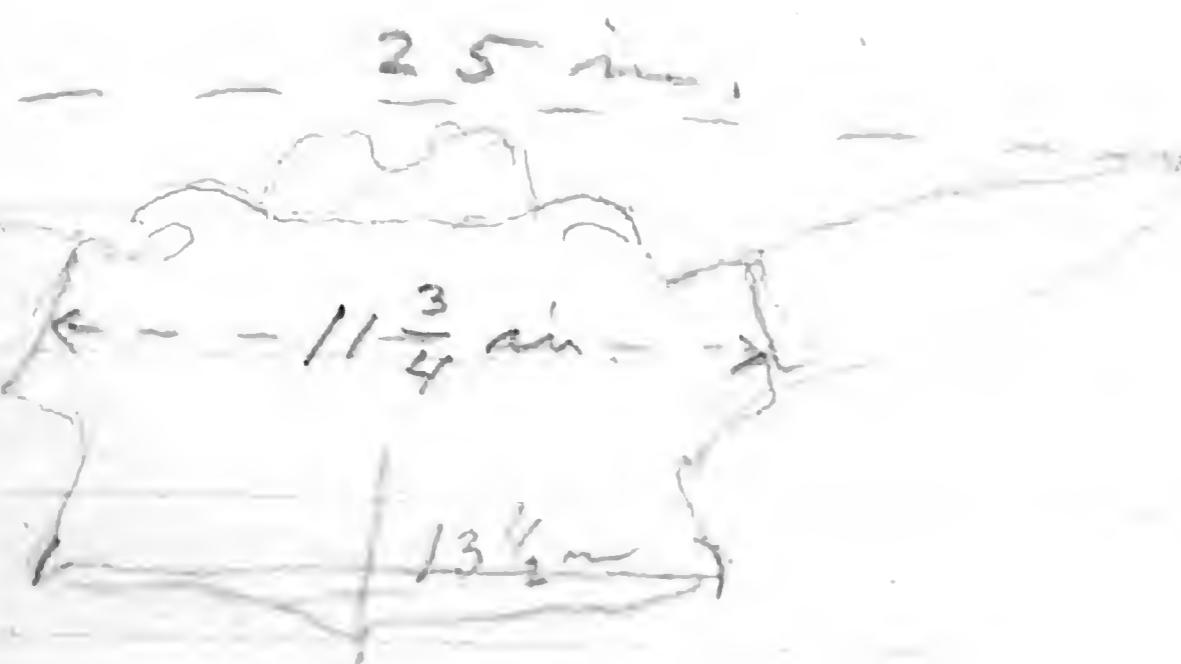
A hand-drawn sketch of a coastal profile. The profile shows a shoreline curving from the bottom left towards the top right. A dashed line extends from the top of the profile down to the waterline. Several labels are present: "Bentley" is written vertically along the left side; "Bentley" is also written horizontally near the top center; "Mudflats" is written vertically on the right side; "Rocky Point" is written near the top right; "S" is written at the bottom left; "N + S" is written at the bottom center; and "W." is written at the bottom right. A small "Y" is located in the upper right area.

Flora of the Tigris River,
Borazan - Tigris River, 1860-61.
All plants - appearance - " "
" - white " "
Sisymbrium erythroloma - not common - fl.
Flowers white or cream - young short
green awl-shaped plants - common.
Lithospermum erythrorhizon - not rare - fl.,
Purplish brown - fruit round,
Castilleja scabrida - very common - fl.

Ril - Blacksmith - from valley
N. of Borazan - from sand.
Christ. Mathiesen,
The soil was found in gravel
at the 3rd house above Borazan.
The men say lots of small
bones were scattered through.
This is at place where sand pit

appears bed of creek (or gully).
The old pit was down in gully
(broken bridge or near it)

The skull in Mathiasen's
house is apparently not
~~an~~ ^{argentinum} (small)
~~Bos~~ ~~columbianus~~, He says
the farmer (in sec. 17, Jordan
m.p.) claims that he saw
other bones, etc.



Saw the head of things
{ on Beaver creek - washed out -
in sec. 17 Jordan m.p.

Bison $11\frac{3}{4}$ in between horns of
ours - 25 in - tip to tip

Took trip through Fischer woods & collected plants.
Found my glasses. Sandpit was better
expansive.

Out "my plants will

be good for you

and so on

After next

and so on

and so on

and so on

and so on

sand

and so on

and so on

and so on

This is evidently all
planned up.

now Chas. Whiting's collection.
One, from the Griffis place
in sec. 17, NW. 1/4 of section,
is a part of a skull of
Elephas columbianus, with
only a little worn off.
This was in gravel about
35 ft. from surface, in
well at Griffis home.

He also has a part of
a mastodon's tooth from
the Wilkerson place in
NW corner of same
township. Here a tank
& other bones & teeth were

taken out from well
(35 or 40 ft deep?) at the
house in NW. 80 of the
town. A. tank, etc.

Now at 17, sec.
17, Griffis gave me
a piece of bone taken
in sec. 10, Center Twp.
He says another, like the
big bone, of which he
gave me one,
had been washed out in
creek bed.

May 16 - 1929

In the valley S. of Hwy 2
is from 10 to 15 miles.
Auburn & Rockville
are major towns.

The older soils of valley are
extremely coarse with Q.
clay loam soil on the
slope. In fact, May 16, 1929
the soil

Erythronium ^{camptostylis}

Lithospermum canescens

Polygonatum ^{aggregatum} *Lithospermum* ^{whitfieldii}

Viola palustris ^{rustica}

Dandelion ^{taraxacum} *Thlaspi*

Carox pennycress ^{lychnitis} *Lithospermum angustifolii* (L.)

Oxybaphus (Pursh) & fl.

Strawberry

Auburnian

Edible ground ivy

From time gone back along
this creek. The valley is
deep & not wide. The soil
is very much like that
described above.

In NE. corner of sec. 15, on 8 rods of
w. is alluvial land 10 ft
above river & about 20 min
walk. = 2 - See table
It is mostly dark, but
upper part is yellow.
Plow field in this part of
country have black soil only

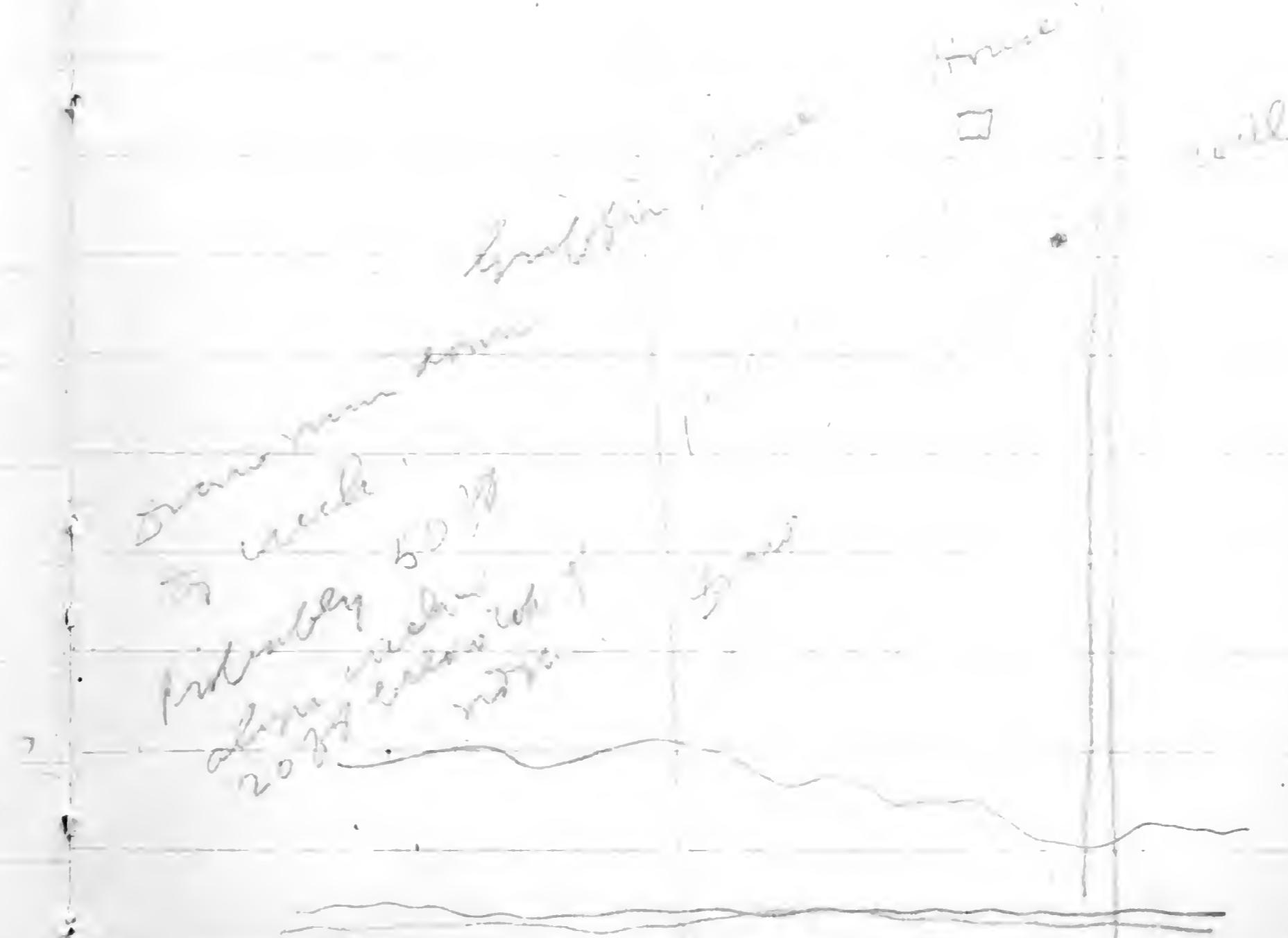
in the little valleys or ravines,

where vegetation
and topography, and especially
ridges (even the smaller ones),
are well.

In sec. 31 (at X), - K. Dan top.
The loess is about 7 ft. deep
(i.e. cut) & often 4-6 ft. in
yellow, with reddish layer &
few larger whitish patches.
Then a red layer suddenly
below into blue (red mottled)
(Kansan loess)



Miss L. Price. If all of
fishes w. there is
diff'ren way out side. One
more border. Kansas diff.



J. E. Wilkinson

W. County line.

(Pit)

□

o

P

well

Draw

The mastodon tusk and the
tooth in Mr. Charles Whitney's
possession, were found in
digging a well at point
marked "Pit".

Another tusk was seen

down there. The tooth was
in a soft ground. It
said they were in
touched vegetation, or
something of the kind.
The tooth went to some
colleges - probably, at
least three years ago.

May 21, 1909

May 25 fare to Cedar Rapids⁶⁵

May 22 take to Logan -

Lunch ⁴⁰ ~~on route~~

R.R. to ~~Cedar Rapids~~

to Cedar Rapids & Iowa City

May 22	Hach 25 fine to Cedar River	65	\$.90
	Take 6 ova -		4.72
	Lunch 40		.45
R.R.	Cedar Bluffs		4.72
R.R.	Cedar Rapids & Ia City		4.06

July 21-1909 - To Agave
left San City at 10:45 AM
from San Antonio via San

50 miles off of Am

May 22 - Saturday

~~left at 4 am.~~

The discussion is exceedingly interesting
all along frontier lines.

Brave little pony, streaked to
little bits along Rd. with a wag.

(Winnipeg & environs)

Between Delap's Logon, Min
following plants were observed:

Prairie.

- *Lithospermum canescens*
- *Vitis palmata*
- *Eryngium campestre*
- *Pedicularis canadensis*
- *Fragaria* —
- Blue grass & *Eryngium*
- *Dianthus* —
- *Oxalis violacea*
- *Asperula canescens*
- *Lithospermum syriacum*
- *Cornandrum umbellatum*
- *Scleria myosoton*
- *Amelanchier alnifolia*
- *Caprea lomatophyllum*
- *Astrocytis Smithii* (Right)
- *Artemisia artemisioides*
- *Rosa arkansana*
- *Ostertilla canadensis*

Almond.

- *Scirpus californicus?*
- *Cardamine hirsutissima?*

New places.

- *Carex* —
- Rainey
- east bank
- *Diarrhena*
- *Mitchella* yellow
- across

Review there are
gravel beds on flats along
rivers & several miles off &
they are about 100 feet
in height & drift away
leaves, more than 100 feet.
Polygonum aviculare occurs in
Crawford Co. on gravel flats
in woods.

In afternoon collected along RR for 69
a mile west of Roland. See prairie
plants.

June 3-1909

Left Iowa City at 3:00 P.M.
& reached Stamford at
6:30 P.M.

Met Paul Knue, botanist &
looked at plants trees.
Took specimens of black
hawthorn & a snapted
elm-like tree (see spec.)
Delivered address before your

audience. Returns to
Cedar Rapids at mid night
& got up at 8:00 A.M.
Dwight spoke at Mechanicsville

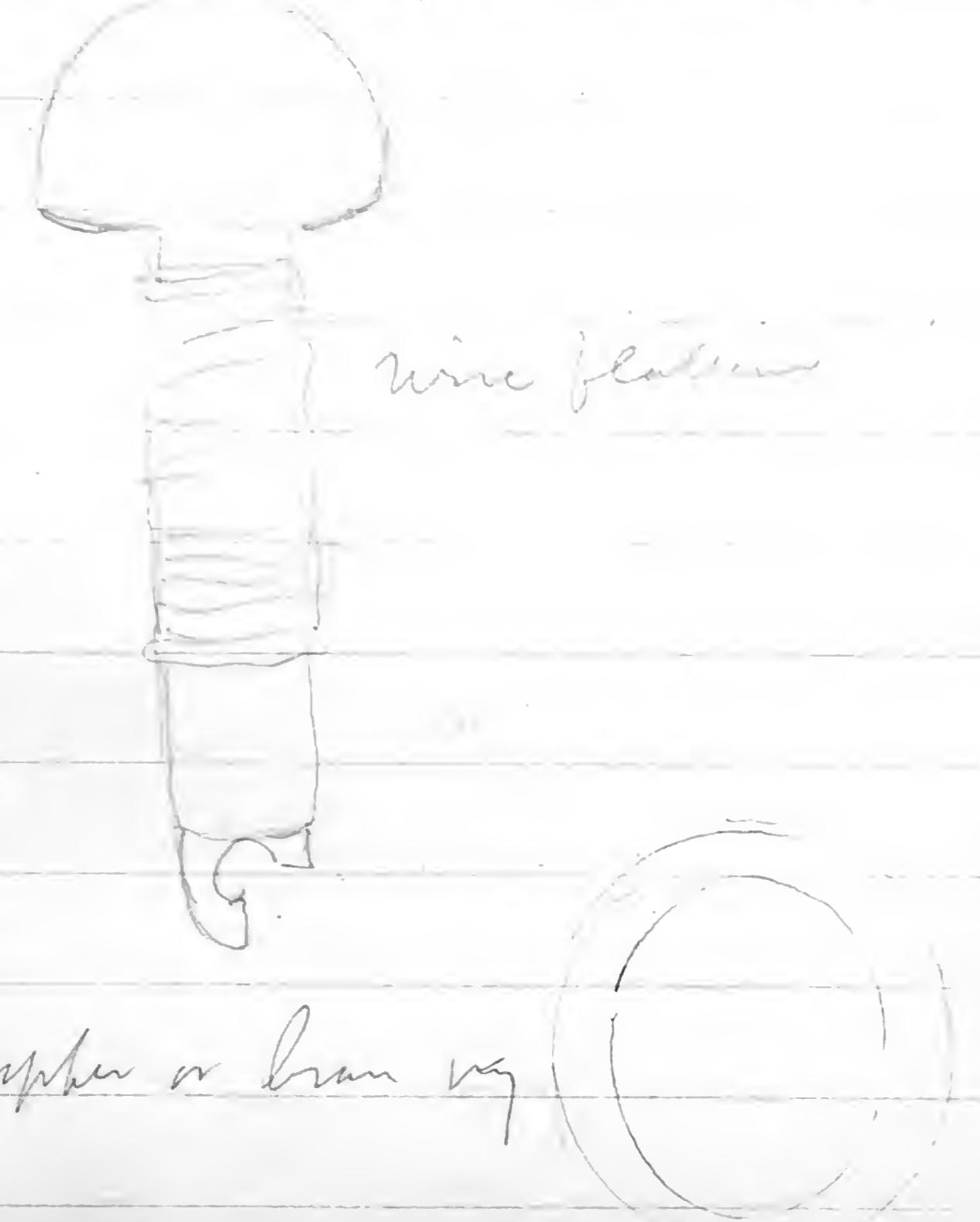
(June 4-1909)

Left Cedar Rapids at
7:30 A.M. on the Atlantic
left on Iowa City at
10:00 A.M. Returns at night to
Norwegian audience. Went to
Story City, took train to Sioux &
then to Minne Valley, which I
reached at 6:25 P.M. on

June 5th

No. 11 Culverin (mn) G. F. C. Miller
Found an Indian skeleton, a cabin
(several feet long, & facing south).
It was ^{marked} 3 ft. down to skull.
The skeleton is that of an adult
male, probably over 6 ft. high.
with fine teeth, & powerful frame.
With its were bear claws (no horns!)
porcupines, & copper bells (like little

shiny balls.) & copper tubes (lapping).
also arrow head (plint), ochre, &
piece of bone, lost the last of
very rusty article - , also pieces
of metal probably rusted. A bone
scraper, ochre, and a wooden
key with wire wrapped around with
rust.



A few copper or brass rings

After 3 more steps, two probably
several & I went

Two

Pipes in pipe,

Two red, one
brown.



Other skeletons have been found
near by, & also scrapers, etc.

Clam shells are almost absent
common on hill.

Bone oak trees (4-6 in) were
laid across over - - - - - 185

The ground was on a level at
85 ft. above creek bottom.
Clams occur. They are strewn

over slope 30 to 50 ft. in one
bottom in abundance.

The hill rises beyond this
to north. At the Bear
Claw necklace

June 13 - 1909 - Mr. Cullinan found remains
of two children - tops of two
little skulls, & several small ribs,
a few large arm & leg bones,
no backbone. Seemed to be in
large piece of buckskin (?) folded
into several thicknesses - 5 or 6 -
about N. of head of old cliff -
about 3 $\frac{1}{2}$ ft deep. A piece
of bowah & black walnut were
with them. Probably stakes had
driven in as marks. -

Small brass ornaments (two) -
- 4 in. - thin -

Frontier well, and O. S.
Oxytropis, and a. sea. The
water is clear, fragrant
Castilleja pallida, & a little

of *area* (?)
virginicum. also the
A. grass.

Pork barrel.
Large tree was standing
burned & in state. Also
some from old cliff
at sta. 1.

At sta. 3 & near it was found
following, but placed fastened!

Oxytropis buckw.

Ceanothus occidentalis (very common)

Comandra umbellata

Lithophragma canescens

Castilleja pallida

Fragaria

But the best area is on south ridge, just above South Ridge. I found *Oxybaphus lamberti* and *Cotyledon woodii* especially abundant, the former producing a phylogenetic effect. Many of the other fgrs. of the latter are reddish or purplish.

The following were found:

- Oxybaphus lamberti* - fls.
- Cotyledon woodii* - fls. + fr.
- Promedea esculenta* - fls. + buds
- Astragalus canescens* - fr.
- Sisymbrium erythroneurum* fr. (name fl.)
- Lithospermum canescens* fl.
- Dolphinarium* - buds.
- Carex pumila* - fr.
- Viola papilionacea* - fr.
- Pentstemon grandiflorus* buds
- Lepidium apetalum* fl.
- Poa pratensis* - fls. & fr.
- Oaxis stricta* - fr.
- Oxybaphus pubescens* - fl. + buds.
- Crassula ovata pubescens* fls.

Comandra umbellata -
shrub - sparsely bran.

Phlox diffusa - many white flowers

Stipa stans " "

Urtica dioica - fl.

Gilia - "

Lycopodium - "

left at 5:30 in forenoon
at Tribune. Waited at Tribune
until 3:15 for train for
Clarkson, was not in train
told to. Mandan, Bismarck, Devil, etc.
Put up at the Hotel, with
Mrs. Beardsley of Omaha whom I
had met on train at Tribune.

June 6 - Friday.

Chase dines & writes.

Went over to

to a farm just S. of Clarkson,
to see bones which were
taken from a well.

The well is well up toward upper
part of a ravine, & they went
down about 3 4¹/₂ ft.

The bones (of which a lot is
left next to well) were at a

a depth of between 9 & 10 + feet
up, or slightly in, a layer
of reddish gray rock with iron
streaks (Iron River). The
rock above it was a
gray clay cemented. And may
have been in part washed
from higher points.
The blue layer was about 3 ft.
thick, & under it, & rest of
way (about 20 or 21 ft.) was
reddish brown joint clay.
They stopped in this,
I saw two bones.

This is probably a buffaloes
(bison) certainly more recent than
most Kansas bone.

Spoke in afternoon with Mr. N.
Mr. Dredge hundred foot long,

and introduced Mr. Duratio,
who was Miss H's host.

Left at 9:20 AM, on freight
for Summit.

In walking over prairie in
morning it noted:

Eryngium angustifolium

Oxybaphus lamberti

Oxalis purpurea

Prairie crocus

Asterolasia canescens

Carex pensylvanica

Poa pratensis

June 7th 1809

Left Fremont at 6:07 am.
via U.P., & reached Misso.
Valley at 8:35 am.

Drove up road from Salina
through woods. Head Rock, -
collected plants.

Returned at 1:35 & had to rush
to get ready for train.

Rift Mo. Valley at 2:26 PM.

Saw much *Corydalis* on bottom.

Also *Erys*, *Tradescantia* (smooth)

& *Anemone canadensis* - little (lo)

Below Crescent a bare

rock cliff was studded with

Pentstemon grandiflorus in flower!

also saw *Oxybaphus wilcoxii* in

bloom near Mo. Valley,

collected plant of it. 1 to 2 ft. at 3.

and also on north south.

June 12 - 1909 Salutes
Left at 9:30 & took C. & W.
for River Sioux.

June 13 - 1909

Reaching River Sioux at
On bottom prairie between Mo. Valley
& Calif. Jr. saw very many
(very very common) *Arenaria canadensis* & *Phlox*
pilosa in flower

also Ros. of Silphie *Lathyrus*

Artemisia ludoviciana Lvs.

Rumex acetosa fls

~~*Agrostis*~~ fls.

Allium canadense fls

At River Sioux - on prairie flats,

Sisymbrium canescens

Equisetum myriochaetum

Hordeum jubatum

Lepidium apetalum

had 30' of snow on the hillsides
on the west side, & water - to
an afternoon. Common ridge &
alone it all gone. The latter
had been covered over & there
were young plants, but
practically all gone now in
afternoon, etc.
at the point where the
Kansan, ~~now a dry stream~~
met on the end front of
point by way up, there
is a splendid bed of
Polygonum grandiflorum in
fine flower.

It is again noticed that
all slopes are uniformly
fresh & green, though the
grasses, etc. are trifled, - at

(Amphibian comes in fine
flocks along river)
close range.

Returns to Mo. Valley at
2:15 pm & drove to Cox's.

Arrive at home. Took time.
Then drove to Snyder, followed
& collected plants, found
cork elm!

In evening went on south
ridge & to Cullinan's.

At night found plants
until 1 am.

June 14

83

Stevens St.

Just S. of first stone bridge and
Snyder's station there are
some stone walls & old
houses, and a well, also
the road goes up
at 2:30 pm. At just S. of bridge,
house occupied by Frank.

June 27 - 1944 There is a ridge
of mesas at least 100 ft high
with trees above. Butts very
defined & unconfusable.

mesas

mesas

It is on E. side of valley above
bottom, on the ground

W. A. Robinson

The gravel pit is

located in a

glacial drift area.

It is a glacial drift area

located

lime pebbles

concretions

gravel.

sand



alternately & interstratified
beds of sand & gravel, the
sand with black streaks
(otherwise nearly white or yellow)
& well cross-bedded.

Shells occur in medium coarse
sand. Town

Habenaria

Pinguicula

Linnaria reflexa?

americana

Valeriana viticella

Seguenzia annua

Oenanthes purpurea?

Kuria -

Below the gravel pit is the

Glauconite & lime sand.

Some of the sand may be

very old.

The white sand is very young

No sand has "nodules" &
little signs of the fine
blue-wire ribs.

Soft white sand has been

This is the W. A. Robinson

pit. Adolphus Mondamin

The Hagenman pit is below

This is Adolphus Hagenman
of Mondamin.

just above spring in N. E. of 16-80-44

there is a great mass of Kansan
shells far up hill

Plaster

Cut! No. 81-44
is worked in yellow sand -
light, off-white sand. The
size is small.

This is about 2 ways up the ridge

In sec. 20 ⁸¹⁻⁴⁴ E. of Little Town

At base, at valley edge, coarse
stone. In first big cut on left,
1/4 way up, fine float stone with
tubes. The next two cuts, show
heavy black loam. On top Kans.
even, & on S. side, dark brown soil,

2-3 ft. above base of S.

white & sandy plaster

Bottom S. Ridge -

700 feet S. of cut

in section 10

2-3 ft. above base

slightly lighter tan - white
of deep yellow sand
bed just on S. side of cut near
church - in sec. 26. 81-44.

is typical, - fine float sand
2 or 3 ft. deeper than about 6-8 ft
of mixed stuff (Kans?).

The sand is medium coarse, &
shows a few fragments of (possibly)
Sphaerium). 5 ft. from base.

Limey & pebbly layer (oxidized)
between Kans & Sphaerium

In sec. 3-80-4th of section
several feet (5-10) deep & some
yellow loam above bottom,
the bottom is in slopes,
the upper part.

The next cut S. is all in a brown
yellow loam, like that above.
Some nodules & a few pieces of
shells.

Cut at turn, S. end, is 10-15 ft deep &
lower 5-6 ft shows beautiful laminations.

Saw a sm. Rhiz. & a few nodules.
This is the brown yellow loam
transition layer.

The valley of creek which I
followed to Missouri Valley
becomes very narrow above
mouth.

E. of Bon. City at 9700 ft

May 26 - 1907

Oryzopsis gracilis

- ✓ Poa pratensis fls.
- ✓ Festuca aquatica
- ✓ Liparis pulvinar
- ✓ Anemone Canadensis
- ✓ Sisyrinchium
- ✓ Ranunculus Eschscholtzii
- ✓ Equisetum hyemale
- + Aster laevis
- Carex discolor
- ✓ Leontodon canadensis longifolius
- ✓ Achillea millefolium
- ✓ Eryngium americanum
- ✓ Oenothera biennis
- ✓ Lithospermum canescens
- ✓ Oenothera villosa fls.
Rosa carolina L.
- ✓ Monarda pulegioides
- ✓ Parthenocissus quinquefolia fls.
- ✓ Glyceria ~~oblonga~~ (L.) remota (L.)
- * Oryzopsis stricta
- Tamiasciurus fls.
- Radiolaria canadensis fls.
- Athyrium filix-femina fls. young
- Lemna sp. foliacea
- Thlaspi arvense
- ✓ Viola pedatifida fls.
- ✓ Habenaria

93

- ✓ Carex stans
- ✓ Carex stans
- ✓ Carex stans
- ✓ Salix lucida
- ✓ Anemone cylindrica
- Mitchella repens
- ✓ Potentilla argentea
- ~~Polygonum esculentum~~
- ✓ Polygonum
- ✓ Carex stans
- Antennaria canadensis
- ✓ Helianthus rigidus
- Rhus glabra
- ✓ Antennaria
- Corylus

May 21-1909 - To Amana
 walked through woods to Ditch Lake.
 Found white oak on clay & yellow
 oak on sand. Found *Ligustrum*
harringtonii & *Ostrya virginiana* just
 barely opened. *Osmunda cinnamomea*
 in fine fruit (mostly green).
Viola pedata was very common
 in the oak openings on sandy hills.
 In the boggy bottoms *Caltha*
 & *Osmunda cinnamomea* were very
 abundant. In the following lists
 the plants (not trees) listed were
 in flower unless otherwise stated.
 Of the trees, those marked ^{shrub} × fl.
 were in fl.

On the bottomlands (n. side)
Phlox divaricata was common -
 in patches

Gaura, *Isopyrum* - wide river,
Succowia -
Claytonia - fruit, some fl.
Hippocratea - fruit -
Potentilla - in leaf.
Primula -
Baptisia bracteata
Asclepias syriaca - flowers &
Trifolium - mostly bud
Centaurium -
Zizaniopsis - mostly bud.
Hedysarum occidentale
Eryngium agavina (green.)
Anemone canadensis - in bud.

Boggs in woods S. of river.

Caltha palustris - fl. & fr.

Osmunda cinnamomea - old fruit

Cardamine hirsutissima - fl.

Thlaspium perfoliatum - in leaf.

Asplenium

Everlasting - in leaf (small)

Bottoms N. of river,

* Quercus rubra - flowers

Solidago - fr. Honey Locust

American Elm - gone.

Salix nigra - fr.

1. river - flower

" longiflora - flower

Black Birch - fr.

Spiraea - juv. leaf.

Craspedium - fl.

Crataegus mollis - fl.

Green ash - fls. gone.

Rhus toxicodendron - juv. leaf.

Common holly - fl. + buds.

Claytonia - buds - fl.

ridges in Aquilegia - fl.

Wetland fern - common - fl.

- swamp - common - fl.

- swamp - common - fl.

Agrostis capillaris - fl.

Yucca - small - juv. leaf.

Yellow Aster - bud & fl.

Ranunculus - as above - fl.

Common buckthorn - fl. & fr.

Prunus pensylvanica - fl.

Chrysanthemum - buds - fl. & fr.

Salix nigra - fr.

Achillea millefolium (juv.)

Iris versicolor (juv.)

Coreopsis lanceolata

Polygonatum multiflorum - fl.

Vitis cordata - fl.

Lathyrus palustris - fl.

Fragaria - fl.

Cistiolum canescens - fl.

Magnolia acuminata (juv.)

N. of Honeymoon - 5. from
wood

99

Amman - May 21 - 1909

- * *B. mucronata* fl. 11' stem
- * " *velutina* fl.
- * " *alba* - fl.

Pithecellobium - fr.

Prunus - section - bud.

Vitis - spina - bud.

Carya *alba* - buds opening

Corylus americana - part fl.

Cornus *panthaea* - buds,

* *Prunus virginiana* - fls.

Psychotria *guianensis* - leaf

Prunus americana - buds,

* *Rileya missouriensis* - fl.

Celtis occidentalis - leafless young

* *Pyrus* *sociabilis* - fl.

Robinia pseudoacacia - leaf.

Tilia americana - juv. leaf

Rhus glabra - var. ¹¹ *opposita* - common leaf

most of these plants. - Side road
- *Grindelia* *americana* - fl. ^{fl.}
Oleaster *repandum*, white in autumn
fr. ^{fr.} *Smilax* - leafy fl. ^{fr.}
Tragia - fl. ^{fl.} *Juniperus* ^{juv.}
Santalum *aceylonense* buds
Parthenocissus - buds
" *Hedera* *hederacea* frond
" *Castanea* *alba* - fl. ^{juv.} ^{leaf}
" *Camassia* *Esculenta* fl. ^{leaf}
" *Asplenium nidus* ^{juv.} *Asplenium filix-femina*
Onoclea *dayi* - fl.
Polypodium - fl.
Schefflera *shuitabalis* fl.
" *Alnus* *virginiana* - juv. fruit.
Ulmus *canescens* - fl.
Cryptostilbe *longipes* - juv. fr.
Adenanthera *bifolia* fl.
" *Abies concolor* - juv.
Cytisoides *europaeum* - fl.
Ispeion *hystrix* - juv.
Morinda *rubra* fl. fl + fr.
" *Lila* *caerulea* - fl.
Platia *spiculata* - juv.
~~*Coptoptis* *frigida*~~

Pits & sandstone
Brown.

Alt Haven Pit

Between Tuxedo & Valley

Cox pit

S. Hyder's below
Logans
Woodbine

Allen's

Magnolia

Soldier.

Pingah.

more
Murray Hill

County line

Between Co. line & Turin

Maple.

Turin

Castane

E. of Maple

W. of Maple

The Clary.

Miramic

Above Turin. Below Roday

Weniger pit

Okanite Shale

wooded green
above Grand Central

Between Turin & Castane

Evidence that deformed in
Afton & not otherwise,

1. Consisted of thin limestone
subbottom of Kansan,
County line exposure,
Zion
Worthington glen.
Castana

2-or at least below Kansan
Cox pit

Cayton pit

Dogar pit

Weniger pit

Grant Cut to Rodney.

Mapleton - E.

Castana

River Zimp (Wallace pit)

3-possibly Afton
Sagan pit
Perriman pit

4-Rodney by, Castana
- also known
Woodbine
Murray
Peyton pit

5-Lots of evidence
Sagan zone
Cox pit
Wallace pit
Giffin well

Muscadine Co. May (1909)

On sand bank - near rd.

Adonis

Viola canina

Asterion -

Oenothera biennis?

Amelanchier alnifolia

Hedera (purpurea)

Elymus (big one)

Ambrosia psilostachya

(Marasmius? -)

Verbasco thapsoides

Antennaria tributa

Rumex acetosa

Lepidium apetalum

Cirsium (woolly, br. not)

Panicum (small hairy)

Carex oblongata (?)

Capsella bursa-pastoris

Geum urbanum

Franseria longistylis

Calystegia sepium (Hedge Bindweed)

Stomisia

Monarda fistulosa

Gentian

Prunella vulgaris

Thlaspi

Thlaspi arvense

Thlaspi

Sesuvium portulacastrum

Microseris glauca

Bromus

Oreaster thlaspi

Franseria

Viola pedata

Z. purpurea

Viola neglecta

Z. purpurea

Viola neglecta

Ranunculus fascicularis

Hedysarum hispida

Polygonum

Sympetrum (all sp.)

Salicis nubecula

Arenaria (all sp.)

Ritellini

Ceratodon purpureus

see p. 115

107

Same plant (starting on page)

These marks X are in both counties
M. = Muscatine - L. = Linnia -

X *Acacia*

X *Acacia* (all sp.)

X *Panicum*

Panicum

X *Panicum* (all sp.)

X *Kuhnia*

X *Carex*

X *Antennaria*

X *Calystegia*

X *Verbasco*

X *Verbasco*

X *Verbasco*

common

(see spec.)

see pr 115

- X *Solidago canadensis*

X *Gentianella*

X *Artemisia*

X *Polygonum*

X *Solidago missouriensis*

X *Carex* caroliniana

X *Primula* sp.

X Acer

X *Thlaspi*

X *Eryngium yuccifolium*

X *Scirpus americanus*

L. *Scirpus*

L. *Polygonum*

L. *Andropogon furcatus*

X *Artemisia ludoviciana*

X *Salix tristis* m. tubifl.

X *Ranunculus pensylvanicus* B. C. L.

X *Lobelia*

X *Carex americanus* m. hifl.

X *Ostrya virginiana*

The road went on - at first

dry & a little rocky

As we came with

a well-tilled, smooth

as flat but wavy to a varying

& then slopes down more.

Brown rocks often seen & then

where shrub brush gets a hold

a head of sand is gathered, a
little small or large.

In bottom of the gullies

pebbles - many

part of sand -

wavy - worked over by the sun

by wind!

Top of road mostly cultivated

(corn or beans) - dry, no

wide early pasture

on the prettier N & S slope the road

is made with black sand

	Indigofera	
X	Fragaria	
X	Prunus	
X	Kalanchoe	
X	Citrus aurantium	
X	Celtis	
X	Convolvulus sepium	
X	Pithecellobium	
X	Psidium guajava	
X	Psidium villosum	
X	Psidium guajava	
M	Zanthoxylum americanum	
M	Bixa orellana	
M	Cocculus americanus	
X	Euphorbia corollata	
	This is in under growth	
X	Gymnocalycium villosa	
M	Gymnocalycium	
X	Gymnocalycium	
M	Solanum nigrum	
M	Withania somnifera	
X	Elatia spicata	
M	Thlaspi capilligerum	

On north side there are much
dipping and broken
layers! —

One of them has breaking
with continuous sand



Following continue

In this sandy part are clusters
of Hemite honey bands —
some in very regular lines.

Another part shows a rounded



(This part is in Kouma W')

at base there is a small
detached mound and a
thin sandstone

With pink

greenish brown sandstone

yellowish brown sandstone

yellowish brown

Hemite

Beds are about 2nd and 3rd
over thin pink sand
yellowish brown sand
yellowish brown with (15 or 20 ft)
brown stone intercyclic
greenish yellow between beds &
thin.

Indicated near the lake, the
part was up slope, some
sand has been washed off
into little ridges or low
sway like Chinese sand dunes
case). Dark coarse sand

All day out, - a good
hike followed by a
good night's sleep.

Evidently from the
wind.

The fence running N. from S. on
of lake was made of wire and
posts. It has been cut off
ridge & at 5 P.M. of the
day I have with all the way

The old post just stuck out of mud,
a new fence has been put up of
all the fence on the ridge, N.S.
as well as E. & W., have had the
same effect.

Nothing one lone cottonwood
in top.

I don't know if it dies.

The next morning windless on the
island in Pigeon Estuary.
Sister & wife.

From Vicksburg, Mississippi,
oil at low of seven.

I also saw fragments of what I
took to be the following.

Artemesia serrata
" *diamabolica*

Dysodina -

Leptilon canadense

Oenothera oakesiana ? (see notes)

116

*Gildas clams (see book E.)**Unio occidens*" *rectus*" *bullockii*" *alatus*" *ligamentinus*" *plicatus*" *metanevra (wardii)*" *undulatus*" *anodontoides*" *umbonium*" *lacrymum*.*Margaritana complanata*

117

June 12 - 1909

RR to Con Ratios .50
RR to River Dime .50River Dime - 1st tier 2 miles .50

RR. to Mo Valley .75

June 13 -

Neville's Bay - 3rd, tier 3rd .70

Mo. Valley # 5455 2.00

August 1909

Apr. 9 - Fare to Fairview	\$17.61
Fairfield to Malvern	1.12
Apr. 10 Hotel	.50
At Zulu - Bark ¹⁵ , RR & Melvin ³⁵	.50
" Malvern - Hotel ¹ ⁷⁵ , RR; Glenwood ²⁰ .95	
" Glenwood - Hotel ¹ ⁷⁵ , RR, ^{(bacon) 25}	1.00
" RR. & Co. Bluffs.	.38
" Co. Bluffs lunch	.25
" " RR. & Inn City	
meal en route	.55
RR to Benton	.26
(Lunch Parrot Jr.)	.25]
RR to Co. Bluffs	.38
RR to Iowa City	<u>5.24</u>
	15.99
	4

Account 1909 - Z. Hause Co.

May 13 - Went to Cedar Rapids ^{.50}	returning
" 14 - Mile to Maquoketa	4.89
Gasoline ^{.50}	^{.50}
Lunch ^{.50}	4.00
May 15 - Bates ²⁵ Hotel - Iowa	1.25
R.R. ^{.25}	.14
Lunch ^{.25}	1.25
May 16 - Lunch - Iowa	.53
Dinner ^{.50} every day at the	.55
at Maquoketa - Hotel ^{.50}	.50
Dinner	2.50
Ticket to Cedar Rapids	4.61.
Lunch	.20
Home to Iowa City	.50
Break	.25

Expenditure - June 3-7-1909

June 3 - Fare to Cedar Rapids .50

Fare & Stamps & return 1.12

June 4 Hotel Cedar Rapids, faces⁸ 1.50 1.70

Fare & Manhattan 1.40-

Fare & Rollans .67

Team to Story City 1.00

June 5 Story City to McMurtry 3.88

Breakfast 50 Team 1.50 Team & eggs 50 2.50

Dinner 80 Undercity 1.90 - rods 15 1.95

Indian bison stamp 45 5.45

Fare to Fremont .95

Clarkson 1.05

June 6 - Fare to Fremont 1.54

67 - Breakfast 25 " Fare McMurtry 1.53 1.78

* Dinner McMurtry 50 Team 1.50 2.00

Fare to Iowa City 5.24

Subper 7.5

Lane City & C.R.	.65
C.R. to McMurtry	4.96
McMurtry to Fremont	.95
Fremont to Scranton	.48
Scranton & Clarkson	.66
2 meals	1.00
	8.60
	17.16

4.68 ✓	
5.44 ✓	25.32
2.07 ✓	24.63
2.00 ✓	
1.04 ✓	
30.13.47	
270 6.00	
320 23.37	
6.40	
6.50	
6.70	

Adventure Exp. May 8 1909

to St. Louis	40
" " Conestoga Wagon	1.15
Hotel	.50
Gasoline	.50
Dinner	.20
R.R. to Iowa City	1.04

Mr. Geo. Fisher
Cartana, Ia.
Mr. A. B. Elliott
Whiting, Ia.

Mapleton

C. F. Griffin, -
Chas. J. Whiting - Elephant tooth
J. E. Wilkinson No W. of Mapleton
from back of Martvoda

W. E. Mr. Whiting has it &
W. E. Dickerson - well-digging

Smithland

A. M. Turman, his.

Pisgah

Eco. Peyton.

Missouri Valley

C. V. Duer.
W. C. Beckert.
Miss Clara Perkins
steen
Claude Cox
John Parker

Logan

Lovely Moreland } well diggs
David Laysham } well diggs

Woodbine

Theodore Warren
Ed. Holton.

Osawau

Mr. Mitchell } in cent
Judge Addison Oliver (trees)

Cartana

John S. Ordway (collaborator)
David Tracy.

Whiting. Mr. Will Whiting wants:
arumone
enolea striatop
aspidium spinifer
dryopteris
asplenium filix-fa
aspidium acutidens
adiantum,

Turin

Babcock, W. E.

(so that he gets photos)
but not get them ready

1.00

15

14

17

12

14



Hotel Metropole

E. E. COLE, Proprietor

FARGO, NO. DAK.

Fargo's Commercial Hotel. Centrally Located. Rates \$2, \$2.50 & \$3

The DELAVAN

American Plan CEDAR RAPIDS, IOWA

elegant rooms, 25 rooms with bath. up-to-date modern hotel, centrally located, adjacent to all railway stations and business center, complete in every detail. Large and well lighted Sample Rooms. Rates that are reasonable. Cuisine above average. Unremitting personal attention to the part of the management and every employee. New elevator. Enlarged office. REST \$2 A DAY HOUSE IN THE CITY. F. M. YOUNG, Proprietor and Manager.



Holden House

Northeast Corner of
Public Square

John Robrahn
PROPRIETOR

Marengo, Iowa

Sample and bath rooms. Electric and gas lights. Rates \$1.25 Per Day

NEW COMMERCIAL HOTEL

J. L. THORNTON, Proprietor DEXTER, IOWA

Good Rooms, Good Meals and Good Service

Rates, \$2.00 Per Day

CHICAGO ROCK ISLAND & PACIFIC RAILWAY.
Rock Island to Omaha TABLE

WEST.						Miles	STATIONS. U. S. Express. April 18, 1909.		WEST			
No 17 Exp	No 19 Mail	No 5 Exp	No 81 Frt.	No 15 Pass	A.M. P.M.		Population Chicago	P.M. lv	No 9 Pass	No 7 Ltd	No 63 Pass	No 83 Frt
a 2 15	a 4 15	a 10 32		a 7 00	0							
A.M.	P.M.	A.M.	A.M.	P.M.								
6 30	9 25	3 15	b 7 30	b \$3 00	181	lv Rock Island	1v	2 25	1 50	b 9 50		
6 40	9 35	3 25	7 40	3 10	183	lv *Davenport	39797 lv	2 35	2 00	10 00		
					187	Farnam						
					191	Turnout						
					195	Walcott	381					
					199	Stockton	137					
					202	Durant	609					
7 18	10 20				208	*Wilton	1139					
					211	Moscow	281					
					216	Atalissa	187					
7 39	10 44	4 35	10 45	4 25	221	ar West Liberty	1623	3 35		11 20		
					227	lv	1v	3 40	3 05	11 35		11
8 03		5 00	12 05	4 53	237	ar *Iowa City	8497	ar		12 05		
					245	lv	1v	4 03	3 30			1
					252	Tiffin	212					
					257	Oxford	647					
					262	Homestead	436					
					267	*South Amana	241					
8 47		5 57	3 45	5 53	267	Marengo	2072					
					274	Ladora	214					
† 9 05			4 55	6 17	280	Victor	722					
					283	*Carnforth						
9 20		6 95	5 30	‡ 6 30	288	ar Brooklyn	1207	ar				
					288	lv	1v					
					294	Malcom	427					
9 43		7 00			298	*Grinnell	4634	5 36	5 12	2 24	8 25	
† 10 00					309	Turner	12			† 2 33	† 9 05	
10 15		7 35			314	Kellogg	592			2 42	10 00	
10 33		7 55			323	*Newton	4398		5 40	3 00	11 50	
					329	Metz	36			3 10	† 12 15	
					335	*Colfax	2553			3 22	12 57	
			No 85		341	Mitchellville	755			3 35	1 40	
			Local		347	Altoona	504			3 47	2 10	
			Frt.		8 58	E. Des Moines				4 07	2 45	
11 10		8 40			9 00	ar Des Moines	75626	ar	7 00	6 40	4 10	3 45
11 23		8 45	A.M.			lv	1v	7 08	6 45	4 23	3 50	
11 40		9 02	b 7 35			363	Valley Jc.	2009	7 25	7 05	4 40	3 05
11 47						366	Commerce	10	7 32			
11 58						373	Booneville	216	7 44			
12 05						377	Van Meter	409	7 52			
12 11						380	De Soto	343	7 57			
12 27			10 18			387	Earlham	426	8 12			
12 37			10 52			393	Dexter	800	8 23			
12 50			11 30			398	ar Stuart	2046	ar			
12 50			b 7 00			398	lv	Stuart	2046	lv	8 35	5 55
1 00						403	*Menlo	395		8 05		
1 15						410	Casey	603		6 17		
1 30						418	Adair	961		6 30		
1 47						426	Anita	975		6 45		
2 00			10 20			433	Wlota	228		7 05		
2 15		11 11	11 10			440	ar *Atlantic	5180	ar	9 53	9 05	7 23
2 27			12 05			446	Marne	375	10 07			
2 38			12 30			453	Walnut	935	10 20			
2 50			12 55			459	ar *Avoca	1815	ar	10 35		8 03
			1 30			461	lv					7 00
						467	Harlan Junction					
3 05			2 15			474	Shelby	649		10 59		8 22
3 16			2 50			474	Minden	405		11 08		8 35
3 25			3 25			478	*Neola	1041		11 20		8 47
3 34			† 3 50			484	Underwood	316		11 32		8 58
3 43			† 4 10			488	Weston	188		11 45		9 08
						494	Chataqua					
4 10		12 50	4 45			499	*Council Bluffs	25231		12 10	10 37	9 35
4 15		12 55				501	U. P. Transfer			12 15	10 50	9 40
4 30		1 10				503	ar *Omaha	102555	ar	12 30	11 05	9 55

For time between Chicago and Rock Island see page 226

The HISE HOUSE is the hotel at West Liberty, Iowa.

NOTICE TO COMMERCIAL MEN

THE NEW WEST HOTEL IOWA CITY, IOWA

THOS. METCALF :: :: PROPRIETOR

A home for the boys, where you can feel at home and get good treatment, good meals and a good room, and a clean bed to sleep in, with hot and cold water in every room. Bath and toilet on the same floor, give us a trial and convince yourself that The New West is the place to stop when in Iowa City. Across the street from the Rock Island passenger depot.

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY. 8.
Omaha to Rock Island TABLE 180

GOING EAST.					MILES	STATIONS. U. S. Express Co. April 18, 1909.	GOING EAST.				
No 18 Pass.	No 20 Exp.	No 6 Exp.	No 64 Mail	No 8 Mail			No 16 Pass.	No 88 Frt.	No 84 Frt.	No 14 Pass.	No 10 Pass.
		A.M.	P.M.	A.M.	A.M.	0	lv	*Omaha	lv	a 7 00	
		a 4 50	b 11 00	a 3 00		6		U. P. Transfer		7 15	
		4 55	11 15	3 15		1		*Council Bluffs	7 25	b 7 00	
		5 05	11 25	3 30		7		Chautauqua			
				11 45		12		Weston	7 50	† 7 50	
				11 55		17		Underwood	8 00	† 8 15	
				12 12		22		* Neola	8 10	8 45	
				12 23		27		Minden	8 18	9 15	
				12 37		33		Shelby	8 30	9 50	
						40		Harlan Junction			
		6 15	12 55			42	ar	* Avoca	ar	8 45	10 35
						lv		Walnut		8 57	11 30
				1 10		48		Marne		9 10	12 05
				1 25		55					
		6 52	1 45	5 10		61	ar	* Atlantic	ar	9 25	1 10
						lv		Wiota		9 38	2 00
				2 00		68		Anita		9 50	2 45
				2 14		75		Adair		10 05	3 30
				2 30		83		Casey		10 22	4 00
				2 45		90		* Menlo		10 32	4 25
				2 58		97					
								Stuart	ar	10 42	4 50
				3 10	6 20	102	lv		lv	b 2 00	
						107		Dexter		10 52	2 30
				3 22		113		Earlham		11 03	2 52
				3 34		121		De Soto		11 19	3 20
				3 50		124		Van Meter		11 25	3 37
				3 57		128		Booneville		11 33	4 05
				4 05		134		Commerce		11 47	4 48
				4 17		198		Valley Junc		11 58	5 10
				9 15	4 30	7 20			b 8 00	10 28	8 58
				9 27	4 40	7 35	ar	* Des Moines	ar	12 10	
	b 6 45			9 35	4 50		lv		lv	12 15	
								E. Des Moines			8 30
		6 47			4 52			Altoona			9 05
						154		Mitchellville		12 46	
		7 07			5 13					12 57	
					5 25			* Colrax			10 33
		7 18		10 17	5 37			Metz			† 11 00
					5 50			* Newton		1 17	11 50
		7 32			6 05	8 38	178		Kellogg	1 33	
					6 23		183		Turner		12 30
		7 45			6 33		192		* Grinnell		No 82
					6 48	9 15	198		Malcom	1 55	2 24
		8 08			7 05		207			2 10	12 18
										Fght.	† 3 15
		8 25		11 10	7 17		213				
							ar	Brooklyn	ar	2 20	A.M. 4 00
		8 38			7 30		lv			b 6 40	
							218	* Carnforth		† 7 02	
		8 50			7 36			Victor		2 35	7 15
					7 48		221		Ladora	2 46	7 40
		8 58			8 00		227		Marengo	2 58	8 15
					8 13		233		* South Amana	† 8 40	
		9 05			8 26		238				
					8 35		244		Homestead	3 18	9 05
		9 17			8 48		249		Oxford	3 28	9 25
					8 48		256		Tiffin	3 43	10 46
		10 40		1 05	9 05	11 00	264		* Iowa City	ar	4 00
							lv			12 05	
		10 58			9 23		274		Downey	4 17	† 12 50
		11 10			9 35		279		* West Liberty	ar	4 30
			a 2 25	1 30	9 45	11 25	279		lv	1 40	
					9 57		285		Atalissa	4 40	2 05
							290		Moscow	† 2 30	
		11 53			† 10 05		293		* Wilton	4 57	2 58
					10 12		299		Durant	5 07	3 20
		11 59			10 23		301		Stockton	5 12	† 3 35
					10 28		306		Walcott	5 20	4 00
		12 10			10 36		318		Davenport	5 45	5 05
							320		Rock Island	5 55	5 15
		12 24							Chicago	10 25	
		1 00	3 25	2 35	11 05	12 25					8 58
		1 10	3 35	2 45	11 15	12 35					
		7 35	8 01	7 25	7 03	4 59					

For time between Rock Island and Chicago see page 227

The HISE HOUSE is the hotel at West Liberty, Iowa.

Naturally If you want Iowa City
 the best hotel in
THE ST. JAMES

is the hotel to go to, because the meals are best, the rooms are good and
 the management courteous and accommodating

Rates \$2.00; With Bath, \$2.50 to \$3.00

J. A. Schiller, Manager

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY.
Minneapolis & St. Paul to Burlington. TABLE 181

GOING SOUTH.						Miles	STATIONS. U. S. Express Co. May 9, 1909		GOING SOUTH.					
No 20 Pass	No 414 Pa	No 66 Pass	No 22 Pass.	No 32 Pass.	P.M.		A.M.	P.M.	A.M.	No 80 Frt.	No 68 Pass	No 432 Pass.	No 82 Frt	No 88 Frt
P.M.	A.M.	P.M.	P.M.	A.M.			Leave.	Leave.	A.M.	A.M.	P.M.	P.M.	P.M.	
a 3 00			a 7 30	a 9 10			Minneapolis							
3 35			8 05	s 9 45	10		St. Paul							
3 55				10 00	18		New Port							
+ 4 05				+10 05	20		Inver Grove		b 6 30					
4 25			8 42	10 28	31		Rosemount		6 30					
4 38			8 56	10 42	38		Farmington		7 08					
4 50				10 54	45		Castle Rock		7 45					
5 02			9 19	11 06	51		Northfield		8 20					
5 08				11 12	54		Dundas		8 48					
					57		Comus		9 15					
5 29			9 45	11 32	58		Faribault		10 30					
5 45				11 48	65		Medford		11 10					
5 57			10 10	12 02	74		Owatonna		12 02					
6 21				12 27	81		Ellendale		1 47					
6 35				12 41	96		Clark Grove		2 30					
+ 6 50			10 58	\$12 55	112		Ar Albert Lea		3 00					
7 10			11 03	1 15			Lv		b 6 45					
7 22				1 27	119		Albert Lea Joint Sta							
7 31				1 36	124		Glenville		7 20					
7 43			11 30	1 47	129		Gordonsville		7 35					
7 55				1 59	136		Northwood		8 00					
8 04				2 10	140		Kensett		8 25					
8 13				2 20	145		*Manly		8 55					
8 19				2 26	149		*Plymouth Junction		9 15					
8 32			+12 10	2 38	154		Rock Falls		9 30					
8 50				12 26	2 53	161	*Nora Springs		10 00					
9 04					3 07	169	ar *Rockford	ar	11 21	b 5 55				
9 15					3 20	175	lv	lv						
+ 9 23				+ 3 28	181		Marble Rock		12 05	6 15				
9 35				3 40	186		Greene		12 35	6 26				
9 49				3 54	193		Packard		+ 1 00	+ 6 33				
9 40				1 00	3 42	210	*Clarksville							
9 55				1 15	3 57		*Shell Rock							
9 58				1 21	4 02	197	ar *Waverly	lv		6 45				
+ 10 03				+ 4 07	200		lv Waverly Jct	ar		7 00				
10 18				1 38	4 23	209	*Waverly Junction		2 10	7 07				
10 35				1 53	4 40	215	Winslow		2 25	7 13				
+ 10 48					4 54	222	*Cedar Falls		3 30	7 28				
11 05					5 10	230	*Waterloo		4 00	7 45				
+ 11 18					5 22	236	Washburn			7 57				
11 35	a 12 08			2 40	5 36	244	La Porte			8 12				
+ 11 50						249	Mount Auburn			8 23				
+ 11 58							Vinton			8 40	b 5 05	3 15	b 2 00	
						257	Shellsburg			9 02	5 25		3 00	
						263	Palo			9 12	5 35		3 25	
							Linn							
12 20	1 02		8 20	\$6 20	268		ar *Cedar Rapids	ar		9 35	6 00	5 00	4 17	
1 15	e \$8 45	b 2 50	3 32	6 50			lv	lv	c 11 55	10 00	b \$7 00		b 7 35	
							Ely		+ 12 43	10 17	7 21		8 10	
							Solon		+ 1 05	10 30	7 35		8 40	
							Morse		+ 1 23	10 40	7 45		8 55	
							*Elmira		1 30	10 45	7 50		9 20	
							Oasis			10 50			9 30	
							West Branch			10 58			10 05	
							Center Dale			11 03			10 15	
2 20	10 00	4 15	4 32	8 10	304		ar *West Liberty	ar		+ 11 15			10 35	
							lv	lv		11 35		No 996	11 45	
										11 48		Frt	12 30	
										12 03		A.M.	1 00	
										12 20		b 8 35	1 55	
										+ 12 30			+ 2 10	
										12 41		9 10	2 40	
										12 55		9 40	3 20	
										1 01		+ 9 56	+ 3 30	
										1 10		10 15	4 00	
										1 18		+ 10 25	4 28	
										1 23		+ 10 32	+ 4 38	
										1 40		11 00	5 05	
8 01				2 15	7 29		ar St. Louis	ar						
				10 25	11 43	7 03	ar Chicago	ar		4 59				

s—Trains Nos. 31 and 32 carry Minneapolis-Kansas City and Cedar Rapids-St. Louis sleepers.

NEAT

NEWTON HOUSE

See the Electric Sign N. M. SPRINGER, Proprietor

NEW

Rates \$1.50 Per Day and Up
 CLEAN ALBERT LEA, MINN. UP-TO-DATE

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY.
 Burlington to St. Paul & Minneapolis. TABLE 182

GOING NORTH.							GOING NORTH.			
No 65 Exp.	No 21 Exp.	No. 19 Twin City Exp.	No. 67 Cedar Rap's Pass.	No 31 Mail and Exp.	Miles.	STATIONS. U. S. Express Co May 9, 1909	No 85 Way Frt.	No 407 Pass	No 87 Frt.	
Chicago St. Louis										
Population							A.M.	P.M.	P.M.	
P.M.	P.M.	P.M.	A.M.	A.M.						
a 4 30	a 4 30		a 7 40			lv * Burlington 25318 lv	b 6 55			
a 2 15						Jefferson St. Depot				
b 6 00	9 15		b 9 15	s 4 20		Latty 42	† 7 20			
6 17			9 33		9	Sperry 88	† 7 30			
6 24			9 39		12	* Mediapolis 852	7 50			
6 33			9 47	4 47	15	Linton 28	† 8 05			
6 42			9 56		20	* Morning Sun 981	8 30			
6 49			10 03	4 59	23	* Wapello 1893	9 10			
7 03			10 18	5 12	29	Bard	† 9 25			
7 14			10 28		35	Cone	10 30			
7 35	10 25		10 45	5 40	41	* Columbus Junct 1127	10 05			
7 48			10 58	† 5 53	48	* Nichols 390	12 05			
8 02	10 48		11 12	6 08	55	Ar * West Liberty 1623 Ar Lv	1 10			
8 15	11 00		11 25	6 25	61	Center Dale 16	† 1 30			
a \$4 32	11 05	a 10 50	11 45			West Branch 657	1 55			
			11 57	† 6 36	67	Oasis 13	† 2 10			
4 48	† 11 20		12 03	6 42	70	* Elmira 240	b 7 00	b 12 30		
			12 10	† 6 49	73	Morse 144	† 2 45	7 05	12 40	
			12 15	6 56	75	Solon 402	3 20	7 22	1 05	
			12 20		77	Ely 172	3 40	7 34	1 30	
			12 30	7 08	82	Ar * Cedar Rapids Ar Lv	4 15	7 50	2 00	
			12 43	7 21	89	Linn 102				
6 45	12 06	11 50	1 00	‡ 7 40	98	Palo 257				
b \$8 10	a 12 35	12 20	4 15	8 00		Shellsburg 565				
						* Vinton 3487	9 15	7 40		
						Mount Auburn 291	10 00			
						La Porte 134	11 00			
						Washburn 79	11 40			
						* Waterloo 18071	12 15	b 10 00		
						* Cedar Falls 5329		10 40		
						Winslow 27		11 15		
						* Waverly Junction 168		11 35		
						ar * Waverly 3353 ar				
						lv Waverly Jct lv				
						* Shell Rock 848		11 55		
						* Clarksville 957		12 30		
						Packard		† 1 00		
						Greene 1224		1 30		
						Marble Rock 332		2 00		
						Ar Rockford 969 Ar Lv		2 53		
						* Nora Springs 211		3 30		
						Rock Falls 98		3 55		
						11 36 217		4 15		
						11 47 217		4 40		
						11 55 220		5 05		
						* Plymouth Junction 220		5 40		
						12 05 220		6 10		
						12 15 230		No 81		
						12 27 236		6 40		
						12 37 241				
						12 47 245				
						Glenville 351				
						Albert Lea Jnt Sta				
						* Albert Lea 5657				
						ar 7 00				
						Clark Grove 7 47				
						Ellendale 252				
						Owatonna 5651				
						Medford 375				
						Faribault 8279				
						Comus 307				
						Dundas 310				
						Northfield 8478				
						Castle Rock 80				
						Farmington 867				
						Rosemount 254				
						Inver Grove 50				
						New Port				
						ar St. Paul 197203				
						s 5 05 364 Ar Minneapolis 261974				

Freight trains going north leave from upper yard at Cedar Rapids.

Hise House West Liberty, Iowa
 E. S. HISE Prop.

RATES: \$2.00 and \$2.25

CHICAGO ROCK ISLAND & PACIFIC RAILWAY.

Dows to Estherville.

TABLE 183

GOING WEST				Miles	STATIONS. U. S. Express Co. Oct. 25, 1908	GOING EAST				
No 439 Mix'd	No 81 W. F.	No 435 Pass.	P.M.			Popu lation	No 436 Pass.	No 438 Mix'd	No 82 Fr. t.	No 82 Fr. t.
			A.M.		b 7 20 b 1 00	16	lv *Dows ar	904	b 8 45	b 4 50
			P.M.		7 50 1 11	23	Rowen	242	8 27	4 25
					8 30 1 25	31	*Belmond	1208	8 08	3 55
					9 00 1 35	36	Goodell	245	7 55	3 20
					9 35 1 46	42	Klemme	292	7 40	2 50
	b 3 00	10 25	2 02	48			*Garner	1200	7 25	b 10 15
				50			Hayfield Junction			2 02
					53					10 05
	3 35				59		Hayfield	40		9 45
	4 10				69		Crystal Lake	202		9 20
	4 40				75		Woden	200		8 55
	5 15						Ar Titonka Ly	245		8 30
					10 50 2 13	57	Miller	10	7 09	No 438
					11 30 2 26	63	*Forest City	1665	6 55	Pass.
					12 35 2 49	73	Thompson	431	6 27	1 15
					1 10 3 09	82	Buffalo Center	701	6 05	12 35
					2 10 3 25	90	Germania	381	5 45	A.M.
					† 2 25 3 34	95	Gerled	b 11 20	11 25	11 55
					2 55 3 45	101	Swea City	11 07		b 10 00
					4 01 4 01	110	Armstrong	378		† 9 40
					4 35 4 15	116	Maple Hill	706		10 56
					5 08 4 25	122	Gruver	15		10 40
					5 25 4 40	129	Ar *Estherville Lv	9650		8 40
										8 00
										7 40
										7 20

Muscatine to Montezuma.

TABLE 184

GOING WEST.				Miles	STATIONS. U. S. Express Co. April 18, 1909	GOING EAST			
No 83 Frt.	No 401 Pass.	A.M.	P.M.			No 402 Pass	No 82 Frt.	P.M.	P.M.
		b 7 30	b 8 15		lv 27 Muscatine 15087 Ar	b 7 10	c 4 00		
		† 7 55	8 35	8	Bayfield	6 52	† 3 15		
		† 8 10	† 8 45	19	Adams	6 42	† 2 55		
		8 57	8 57	16	* Nichols	6 35	2 45		
		10 00	9 10	23	Lone Tree	6 16	1 45		
		† 10 15	9 16	26	River Junction	6 07	† 1 00		
		10 22	9 20	23	* Iowa Junction	6 02	12 55		
		11 15	9 33	31	Riverside	5 57	12 50		
		11 55	9 49	37	Kalona	5 39	11 55		
		1 05	10 06	45	Weilman	5 22	11 15		
		† 1 25	10 16	49	Nira	5 07	† 10 35		
		1 40	10 23	53	Kinross	5 00	10 23		
		2 05	10 35	58	South English	4 48	9 55		
		2 25	10 45	63	* Webster	4 37	9 30		
		2 45	10 55	57	Keswick	4 27	9 15		
		3 15	11 06	72	ar *Thornburg 233 lv	4 15	8 50		
		3 35	11 18	77	ar * What Cheer 2531	4 00	8 30		
		4 25	11 35	72	* Thornburg	3 48	8 00		
		4 45	11 45	78	Gibson	3 37	7 40		
		5 05	11 55	80	Barnes City	3 27	7 25		
		5 30	12 15	83	ar * Montezuma 1294 lv	3 10	7 00		

Wilton Branch.

TABLE 185

GOING WEST.				Miles	U. S. Express Co. April 18, 1909	GOING EAST.			
No 501	No 503	No 505	Mis			A.M.	P.M.	A.M.	P.M.
					!v Wilton 35 ar	1139	b 10 45	b 3 50	b 7 10
					Summit	10 30	3 37	6 45	
					ar Muscatine 6 lv	15089	10 15	8 20	6 25

GRAND HOTEL MUSCATINE, IOWA

Modern. Steam heat. Sample Rooms. In the heart of the city, one block from the depot, banks and opera houses. RATES \$2.00 and \$2.50.

